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Coercive Control and Physical Violence at the Onset of Dating Relationships: A Prospective Longitudinal Study

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AUTHOR'S DECLARATION OF ORIGINALITY

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ABSTRACT

Intimate partner violence (IPV) has been suggested as a consequence of coercive control (CC), a pattern of demands placed on a romantic partner, threats about what will occur if the demands are not met (e.g., IPV), and surveillance to ensure that demands have been met (Dutton & Goodman, 2005). This hypothesis has yet to be examined among dating couples, and little is known about how CC and physical violence arise in dating relationships.

The current study had three main objectives: (a) to determine the way in which CC and IPV change over time in newly established dating relationships, (b) to examine the influence of CC and physical violence on each other, and (c) to obtain qualitative information on individuals' own experiences with and beliefs about CC. An online survey about CC and physical violence in participants' own relationships was completed at three two-month intervals (baseline and 2- and 4-month follow-ups) by 165 women who had been dating their romantic partners for two months or less.

On average, CC occurred at a rate significantly different from zero at the first time point, whereas physical violence did not, providing some support for CC as a precursor to violence. As well, CC decreased over time, suggesting that once a culture of CC had been established, tactics of CC may not need to be used as frequently. Despite many participants describing CC and intimate partner violence (IPV) as part of the same phenomenon, measurement of each of the constructs at a given time point did not significantly predict subsequent occurrences of the other construct. A common theme that emerged among participants' accounts of CC and IPV in their own relationship was the role of jealousy as a precursor to both IPV and CC.

This study was one of the first to examine participants' experiences of relationship processes (such as CC and IPV) at the very beginning of a dating relationship. Results suggest

that the relation between CC and IPV is quite complex, and further studies that include other related variables in the model, such as jealousy and trust, are recommended.

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"YES. Yes, yes, yes. Absolutely there is a relationship between physical violence and control in dating relationships. I have lived it, with a guy who wanted to control my every move and did control my life, and also hit me to instill fear in me so he could maintain control over everything I do because he knew I was terrified of him beating me up. He would give me black eyes, throw me down stairs, pin me against the wall with knives to my throat, the list goes on. And, I guarantee you, it was all about control." -Anonymous Participant

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Literature Review

Overview

Early adulthood is a time of growth and exploration, during which individuals increase their independence and come to be seen as responsible for their behaviour (Arnett, 2006). One common developmentally appropriate experience that marks this stage of life is dating, a process through which individuals search for a partner with whom to become romantically involved. In North America, this partner selection process follows a typical pattern in which two individuals spend time together in order to see whether they are romantically compatible. They then either decide that they are not compatible and part ways, or decide to see each other exclusively, entering into a romantic relationship.

Although the majority of relationships are healthy, many are characterized by acts of physical, sexual, and/or psychological aggression. Two important concepts necessary to comprehend the dynamics within early dating relationships, particularly abusive ones, are power and coercive control (CC). When there is a perceived power imbalance between partners, demands followed by threats of consequences for noncompliance (often physical violence) may be exerted in an attempt to regain that power (Stark, 2007). This pattern of CC as it relates to intimate partner violence (IPV) has only recently been formally examined in the research literature. As such, the way in which coercive control develops across time and relates to acts of physical violence within a dating relationship remains unclear.

In the literature review that follows, research on the function that dating plays in adolescence and young adulthood, with a particular emphasis on how perceptions of the power balance between partners influence interactions between partners, will be outlined. Previous

studies that have examined the development of IPV longitudinally will also be reviewed so as to better understand its temporal course. As well, a theoretical conceptualization of CC will be presented and discussed with respect to its role in IPV.

Life Span Development

In order to understand an individual's experiences, a developmental perspective must be taken, as each individual is shaped by changes within themselves and their environment. Development refers to a pattern of changes (usually growth) in biological, cognitive, and socioeconomic processes that an individual undergoes during their lifespan (Santrock, 2012). According to Santrock (2012), the lifespan is divided into developmental periods, with estimates of the age ranges within. Childhood includes the prenatal period and lasts until approximately the age of 11 years. It is during this period that the most growth occurs (both physical and cognitive), as children become capable of taking care of themselves and develop important academic skills such as reading. This period is followed by adolescence, which lasts until approximately the late teens. It is during this phase that an individual undergoes puberty and begins to prepare themselves for the next phase of their lives by exploring career options and establishing their own identity. The final period of development is referred to as adulthood. Given its large age range, it is usually divided into three phases: early adulthood (from the late teens to approximately 30 years old), middle adulthood (approximately 30-60 years old), and late adulthood (60 years until death). During early and middle adulthood, personal and economic independence is established. In later life, there is increased reflection about one's life purposes, and finally an adjustment to decreasing health and lessened responsibility.

The transition from adolescence to adulthood has been identified as being particularly important. This life phase is referred to as emerging adulthood and encompasses the ages of 18-25 years (Santrock, 2012). According to Arnett (2006), this phase is characterized by a number

of common characteristics, including optimism about the future, a feeling of being in-between, being self-focused, instability across domains of life such as love and work, and the exploration of identity. Emerging adulthood will be the focus of the present study, given that it is during this period that romantic relationships flourish (Paul & White, 1990).

Social Relationships and Intimacy

During pre-adolescence and adolescence, there is a shift away from parents as the main source of social interaction towards same-age peers as the primary source of social support (Santrock, 2012). This transition usually begins with same-sex friendships during early to middle adolescence before transitioning to mixed-gender friendships, and finally to romantic relationships (Collins, Welsh, & Furman, 2009). Fine (1981) proposed three purposes of pre-adolescent friendships: (a) to try out behaviours that might be considered improper in adulthood, (b) to learn appropriate ways of handling problems of growing up, and (c) to aid in the development of one's self-image. Similar to Fine's third purpose, Erikson's psychosocial development model (1968), which outlines eight stages of lifespan development, each with a corresponding developmental task to be accomplished, views the primary goal of adolescence as the development of one's individual identity. Interactions with peers (both romantic and platonic) are viewed as one way of developing this identity. Young adulthood, the next stage in Erikson's model, is characterized by a quest for the development of intimacy. Erikson's (1968) description of intimacy consists of openness, sharing, trust, self-abandon, and commitment. Whereas the psychosocial stages in Erikson's model are presented as following a temporal sequence that requires the resolution of one stage before moving on to the next, Paul and White (1990) argue that the development of intimacy and identity occur simultaneously during the transition period of late adolescence, or what is more contemporarily referred to as emerging

adulthood. Paul and White (1990) define intimacy as "the extent to which the individual has achieved a capacity for relationships characterized by open, honest communication, mutual care and respect, the capacity to accept and resolve differences equitably, and mature sexual attitudes and behavior" (p. 380). This notion of intimacy consists of cognitive, affective, and behavioural components, and is applicable to both friendships and romantic relationships. According to Paul and White (1990), it is intimate relationships that help an individual develop their own identity. This echoes the ideas of Sullivan (1953) who viewed interpersonal relationships as validating self-worth.

Beyers and Seiffge-Krenke (2010) used a 10-year longitudinal design and a sample of youth (age 15 at the start of the study) to test whether there is a developmental ordering of intimacy and identity development as proposed by Erikson (1968), or whether development of intimacy and identity can occur simultaneously. Using a cross-lagged model, the authors found that Erikson's (1968) hypothesis of a developmental progression from identity development to intimacy was supported, indicating that this theory holds true for 21st century adolescents and emerging adults, fifty years after the theory was proposed.

White, Speasman, Costos, and Smith (1987) propose that a relationship can fall into one of three maturity levels based on the individual's ability to take the other's perspective, communicate effectively, commit to the relationship, care for the other, and exhibit sexual maturity. The least mature level is described as being self-focused, with the importance of relationships being placed on the effect that they have only on the self. As such, these relationships are usually maintained only when convenient for the individual and when communication is focused on external or self-related topics. Paul and White (1990) indicate that the least mature level describes most individuals in the late adolescence to early adulthood phase.

The second level is role-focused. That is, the individual considers the other as their boyfriend or girlfriend and is committed to maintaining their role as part of that relationship. However, this commitment is to the role of boyfriend or girlfriend, and is not tied to the specific other. At this level, there is some sharing of feelings. Finally, the most mature level is the individuated-connected level in which one can take another's point of view and anticipate another's needs. Emotional issues and topics such as the relationship itself are openly discussed and a commitment to the other is expressed.

Some factors may influence the typical trajectory of relationship development. Fischer (1981) set out to examine gender differences in intimacy during the transition from adolescence to adulthood. Women tended to advance to a more intimate way of relating to their partners earlier than did men. Beyers and Seiffge-Krenke (2010) have recently replicated this finding, noting that women displayed significantly higher levels of intimacy at age 25 than did men. Pleck and Sawyer (1974) cite the sociocultural factors of individualism and connectedness as accounting for gender differences in intimacy. The authors suggest that because men are socialized to prioritize achievement of individual goals, men have relatively underdeveloped interpersonal and emotional skills, hindering the development of intimacy.

Dating Relationships

The next step in the natural progression of relationship development after forming friendships with other-sex peers is the start of a romantic relationship, usually through the process of dating. Dating has been theorized to fulfill many different functions. According to Skipper and Nass (1966), it provides a means for individuals to learn how to interact with the other gender, provides recreation, aids in the selection of a partner for marriage, and can enhance one's social status with peers when one dates someone who is seen as desirable by others.

McCabe (1984) and Rice (1984) present three additional functions that dating serves. These functions are: providing a ground for sexual experimentation, offering companionship through shared activities, and developing intimacy. Paul and White (1990) further add that because dating is particularly influential in helping an individual differentiate from their family of origin, the formation of one's identity should also be included in this list. The most common form of dating is serial monogamy, in which an individual exclusively dates one person for some time before moving on to the next exclusive relationship (Sorenson, 1973).

Differences in dating as it occurs at different stages in the lifespan have been proposed. For example, individuals who have just begun dating have been found to more often enter into romantic relationships with both other- and same-sex partners than individuals in dating relationships in later years, who tend to date either same-sex partners or other-sex partners exclusively (Beyers & Seiffge-Krenke, 2010). This variability in the gender of dating partners, which is characteristic of the adolescence stage, has been proposed to serve the functions of either providing a cover for a nonheterosexual orientation, or to explore and narrow in on one's sexual identity (Collins et al., 2009). Furthermore, adolescent dating relationships tend to be more short-lived and transient than adult romantic relationships. Connolly and McIsaac (2011) found that the average adolescent relationship lasts between six to twelve months. However, the average length of relationships also varied across the adolescent period, with the expectation that relationships that are entered into in later adolescence will be more enduring (Carver, Joyner, & Udry, 2003). Unlike relationships in middle adolescence which have a more fervent quality, relationships in emerging adulthood are characterized by evaluations of whether there is compatibility between partners and whether a commitment to the other partner is desired. This decision to be committed to the relationship must be weighed against the desire for autonomy

and a desire for fun, which has been shown to result in the postponement of a firm commitment (Beyers & Seiffge-Krenke, 2010).

According to Riggs and O'Leary (1989), as society evolves, dating practices have evolved as well. Adolescents are entering monogamous relationships at earlier ages. This has also been accompanied by a shift in the age at which individuals are getting married, with marriage occurring later (Gibson-Davis, 2011). This results in a longer dating period, with dating becoming an end in itself, rather than a means to the end result of marriage. This longer courtship period also creates more time for conflicts to arise in dating relationships.

Theories of Power in Relationships

A necessary step in understanding relationship dynamics is the examination of the division of power between partners (Bentley, Galliher, & Ferguson, 2007). French and Raven (1959) outlined the five bases of power that one individual (referred to as O) can exert over another (referred to as P) if O holds greater power than P. Two of these bases, reward and coercive power, are particularly relevant to the exploration of power dynamics in intimate relationships.

Reward power refers to the ability of O to either provide a positive stimulus or to remove a negative stimulus if P complies with O's demand. The strength of this power held by O depends on P's belief that O can in fact provide the promised reward minus the strength of P's perception that P will be rewarded even if they do not comply. French and Raven (1959) note that providing rewards tends to increase P's attraction to O.

Coercive power is similar to reward power in that it is based on the consequences of compliance or noncompliance. Coercive power is the ability of O to punish P for not complying with a demand. The effectiveness of coercive power is based on P's perception of the harshness

of the punishment multiplied by P's belief that the punishment will be avoided if they comply. Knowing that O has the power to provide punishment tends to decrease P's desire to be with O. Furthermore, it is noted that this perception of O holding coercive power over them will make P wish to leave the situation entirely. Thus, in order to be effective, coercive power must be combined with a means of ensuring that P cannot remove himself or herself from the sphere of O's influence.

Other theorists have focused on the similarities and differences between coercive and reward power. Heath (1976) argued that the two types are theoretically the same in that the power that O has over P is determined by the dependence of P on O for the receipt of some outcome (regardless of whether it is negative as in punishment or positive as in reward). Conversely, Molm (1997) argued that theories of power must include punishment as distinct from reward because nearly all social exchanges involve some combination of reward and punishment. Furthermore, she argued that it is illogical to examine one and not the other, and that without examining both, interactions between coercive power and reward power cannot be examined.

Consistent with French and Raven's (1959) theory described above, Molm's (1997) theory is based on the assumption that punishment may not necessarily be severe, that it is not necessarily one-sided, and that although threats may be expressions of power, they are not a necessary component of it. Furthermore, her theory excludes isolated one-time events of coercion, viewing coercion as a pattern of behaviours. Her theory further necessitates that for an action to be considered coercive, an individual must not be coerced so severely (as by severe physical force) that they do not have any choice but to comply. In her experiments, Molm (1997)

found that the use of punishment increased in frequency and strength when there was a greater power imbalance in an exchange.

According to Emerson's (1962) power-dependence theory, a theory that largely focused on positive exchanges within a relationship, the source of O's power over P is the dependence that O has on P. This power-dependency theory was later fit into the broader context of social exchange theory, which examines the benefits people provide and receive during social interactions over time, as it is influenced by the dependence that each partner has on the other for resources.

Power is viewed as an important factor in Molm's (1997) theory too, in that equal co-dependence between partners increases the likelihood of a relationship continuing, whereas unequal dependence results in power imbalances in the relationship. Here, dependence is defined as "the extent that outcomes valued by the actor are contingent on exchange with the other" (Emerson, 1962, p. 29). This dependence is based on the value that P and O ascribe to the reward that the other controls as well as the extent to which there are other sources through which P and O can obtain those rewards. An implication of this is that power can only be relationship-specific, and therefore an individual cannot be said to be a powerful person overall, but rather powerful within the context of a given relationship. Furthermore, O's and P's power within their relationship are independent, in that a decrease in O's power within the relationship does not necessitate an increase or decrease in P's power. If a power imbalance in favor of O does exist, the use of this power by O to influence P can be either without intent or can be strategic. The power imbalance in the relationship can be exploited by O providing and withholding rewards dependent on P's behaviour.

According to power-dependence theory, there are four means of decreasing the power imbalance within a relationship: by either increasing P's available alternatives, decreasing O's available alternatives, increasing O's value of the exchange with P, or decreasing P's value of the exchange with O. These changes are difficult to enact, in that as much as P may wish to decrease the power imbalance, O may wish to maintain it. This represents a maintaining factor for imbalances of power in intimate relationships.

The current study aims to investigate patterns and perceptions of the role of power and control in individuals' newly formed dating relationships. Results of this study will be interpreted within the framework of the reviewed power theories.

Power and IPV

Studies have shown that in North America, equal division of power between heterosexual partners is considered ideal by both men and women (Bentley et al., 2007). However, given that men are socialized to be dominant in relationships and women to be more submissive, holding less power in a relationship may be experienced as more aversive for men than for women. As a result, men may be more likely to attempt to increase their power in the relationship than women (Bentley et al., 2007).

French and Raven (1959) propose that violence in relationships represents the attempts of one partner to gain or maintain power over the other partner. This is consistent with many studies that have found a positive association between dissatisfaction with the power imbalance in a relationship and the perpetration of physical violence in both dating and marital relationships (Kaura & Allen, 2004; Rogers, Bidwell, & Wilson, 2005).

Assuming that the power balance within the relationship mirrors that of the patriarchal society in which it occurs, it has traditionally been theorized that within heterosexual romantic

relationships in North America the man holds more power than the woman. This assertion was supported by a study by Bentley et al. (2007), which found that the majority of men and women reported that in their relationship, the man had the final say in decision making. Eaton and Rose (2011) wished to specifically examine changes in dating practices with regard to equality of genders over the past 35 years. They did so by examining studies that were published in the journal *Sex Roles* from 1978-2010. Despite societal changes that have resulted in greater equality between men and women during the specified time period, results of the review determined that gender-typed interpersonal scripts and dating practices in which men hold more power continued to dominate (Eaton & Rose, 2011).

However, the perception of imbalance of power favouring men was not found to be the case in a study of 957 high school students by Giordano, Longmore, and Manning (2006). The authors found that boys in intimate relationships reported that their partner exhibited more attempts at influencing them and exerted more actual influence over them than they did over their partners. The areas of influence reported upon ranged broadly, including boys' behaviour within the romantic context and academic performance. Boys also reported that the overall power balance in their relationships favoured their partner. Here, power was defined by who was most likely to get their way if the partners disagreed on issues in specific domains. Boys were more likely to report that their partner held more power the longer the duration of the relationship.

Giordano, Soto, Manning, and Longmore (2010) extended their previous work by examining the way that these power dynamics are related to teen dating violence. In a sample of 956 teenagers the authors found that male teens who reported perpetrating violence were more likely to perceive themselves as having less power in their relationships compared to their

partners than male teens who did not report violence perpetration. This was not found to be the case for girls. The authors suggest that the perceived imbalance in power within the relationship is a potential precipitant to violence, with the violence acting as a means to equalize the imbalance in power. Consistent with this interpretation, Bentley et al. (2007) similarly found that rating one's partner as humiliating or disparaging was associated with perpetration of violence. However, Bentley and colleagues' (2007) study also found that among men, holding the majority of decision making power was associated with perpetrating violence. This seems to support the notion that in some cases, violence is a means of exhibiting or maintaining one's greater power in the relationship, rather than as a means to increasing one's power to obtain equality or a power advantage. Whether violence represents a means of maintaining or gaining power (or both), these studies support an association between perceptions of power and dating violence.

Definition and Prevalence of Dating Violence

Initially, dating was written about by researchers as being relatively innocent and conflict-free (Gelles, 1972). It was only after the high rates of marital violence became known that attention was turned to dating violence (Sugarman & Hotaling, 1989). One issue that has clouded the literature on dating violence is the way in which it is defined. First, there is a lack of consensus as to what actually constitutes a dating relationship. The word "dating" has been used interchangeably with "courting," though there is no universally accepted criterion for determining whether courtship is occurring. Sugarman and Hotaling (1989) define dating as "a dyadic interaction that focuses on participation in mutually rewarding activities that may increase the likelihood of future interaction, emotional commitment, and/or sexual intimacy" (p. 5). This study will use this definition to guide the literature review, but will allow participants' own self-

classification of being in a dating relationship to determine their eligibility to participate in the current study.

Sugarman and Hotaling (1989) opted to define dating violence as "the use or threat of physical force or restraint carried out with the intent of causing pain or injury to another" (p. 5). They further note that it is the *acts* of violence that are important and not the severity of the outcomes that they cause (e.g., extent of injury). Most notable in this definition, however, is the absence of psychological abuse (though the authors do acknowledge its role as a tool in one partner controlling another) and sexual aggression (which the authors conceptualized as a form of physical violence). This definition has been widely used in the dating violence literature (Lewis & Fremouw, 2001).

The current study will use the term "physical violence" to distinguish physically aggressive behaviours from psychologically abusive acts. Because sexual aggression is a physically violent act that can also be used to exert or display power over another individual (as is true of acts of coercive control), sexual aggression will not be examined in the current study due to its overlap with both physical and coercive control.

The conflicting definitions of dating violence that have been used in the research literature is one of the main factors that have made it difficult to come to a consensus on the prevalence and incidence of dating violence (Sugarman & Hotaling, 1989). In terms of studies that only considered physical violence in the definition of dating violence, Katz, Kuffel, and Coblentz (2002) found that in their two samples of male and female undergraduate students, 47% and 33%, respectively, reported that their current relationship involved physical violence. Capaldi and Crosby (1997) reported that in their sample of late adolescents 31% of young men and 36% of young women had committed at least one act of physical violence against their

partner at some point during the relationship with their current partner. For the most part, estimates of violence perpetration in the past year have ranged from 20-40% (Archer, 2000).

The Gender Debate

There has been no greater debate in the IPV literature than the one over gender differences in rates of perpetration and victimization between men and women. There are two camps in this debate: those who adopt the perspective that violence is a significant issue regardless of whether it is perpetrated by a woman against a man or vice versa and those who argue that the gender of the perpetrator versus the victim cannot be ignored given the social and physical differences between the genders and the effect that gender has on the experience and consequences of violence (White, 2009).

The gender-sensitive approach has focused on societal issues as they influence the balance of power within relationships. The fact that Western society is patriarchal has largely been cited as a contributing factor in the power differential between men and women within romantic relationships (e.g., Pence & Paymar, 1993; Yllo, 1983). In a patriarchal society, men are traditionally the head of the household and hold most of the decision-making power.

In a 1976 paper, Straus argued that because of the patriarchal structure of Western society, women are more often victimized by men than the reverse. Furthermore, he argued that the purpose of the violence used by men was to dominate women, whereas the violence perpetrated by women was usually in self-defence. Such statements have led to a barrage of research on differences in rates of and motives for violence perpetration between the genders.

A study of high school students by Molidor and Tolman (1998) found that among high school students who had dating experience, 36.4% of girls and 37.1% of boys had experienced physical violence in their relationship. This finding points to gender equivalence in physical

violence victimization. However, when severity of violence was examined, it was found that boys experienced significantly more acts of physical violence of moderate severity (e.g., being pinched, slapped, scratched, and kicked) than girls, whereas girls experienced significantly more severe violence (e.g., being punched and being forced to engage in sexual acts against their will) than boys.

In order to compile the results of the numerous studies on perpetration and victimization rates by men versus women in North America, Archer (2000) conducted a meta-analysis to address the gender symmetry debate. Results of the meta-analysis indicated that when individual acts were examined, women were more likely to have used acts of physical violence against men and to have done so more frequently than men. It should be noted that although this difference was significant, the effect size was very small. However, when the consequences of the violence were examined, women were more likely to have been injured as a result of their partner's violence, though the effect size for this comparison also was small.

High rates of dating violence have been reported not only in North America, but also around the world. In a study of 13,601 undergraduate students from 32 countries, Straus (2008) demonstrated that, on average, about 25% of men and women reported having used physical violence against a partner in the last year. When severity was examined, 8% of male students and 11% of female students reported having used severe physical violence against a dating partner in the past year. Although results varied greatly between countries, overall, the perpetration rate of physical violence by women was 29% higher than the rate of perpetration by men. When only severe violence was examined, the perpetration rate by women was 39% higher than perpetration by men. Symmetry in dating violence was also examined, with results indicating that the most common pattern of aggression was mutual violence in every country, with approximately 69% of

the cases reporting violence use by both members of the couple. Female-only violence was reported in approximately 20% of the relationships, whereas male-only violence was found in approximately 10% of relationships. Rates of directionality for severe violence followed the same pattern, with mutuality most common, followed by female-only, and lastly male-only violence.

It should be noted that across studies, violence severity has generally been evaluated with the Injury scale of the Revised Conflict Tactics Scale (CTS2; Straus, Hamby, Boney-McCoy, & Sugarman, 1996). This scale provides little information about the consequences (both physical and psychological) of the violence experienced, and therefore may not be providing a clear picture of gender differences in the effects of the violence.

The main explanation that has been suggested to account for women's use of physical violence is that the violence was committed out of self-defence, or was the culmination of years of physical and emotional abuse (Straus, 2008). This long-standing assumption, however, was not thoroughly investigated empirically before coming to be seen as a fact (Straus, 2008). Upon evaluation, self-defence seems to be the motive for female's violence in a minority of cases, though there are some mixed findings. Molidor and Tolman (1998) found that high school girls indicated that their partner started the violence in 70% of cases. In contrast, boys reported that their partner initiated the violence in 27% of cases. DeKeseredy, Saunders, Schwartz, and Alvi (1997) found that only 6.9% of women reported self-defence as their motivation for the use of physical violence. Other studies have reported low rates of self-defence as well (Cascardi & Vivian, 1995; Felson & Messner, 1998). A recent review of the literature found that of the 10 papers that compared men and women's use of violence for the purpose of self-defence, five of them found women to be more likely to use violence out of self-defence, four did not find any

difference between genders on the use of self-defence, and one found that men reporting using violence as self-defence significantly more than women (Langhinrichsen-Rohling, McCullars, & Misra, 2012). Studies that have investigated the motivations for women's use of violence against intimate partners have generally found little differences in men's and women's motivations (e.g., Cascardi & Vivian, 1995).

One suggestion that has been made by Straus (2008) with regards to why reports of women-only violence might be more prevalent than men-only violence is itself rooted in gender norms. Given that men are often taught never to hit a woman, they may be less likely to do so until after they have experienced repeated violence by their partner. The same is not instructed of women, and therefore women may not have the same hesitancy to initiate the first act of physical violence, and may also be more likely to report that they have perpetrated violence.

Hamby (2009) argues that the literature to date on gender differences supports a "moderate asymmetry hypothesis," wherein men perpetrate physical IPV more than women, but that the rates are not so discrepant so as to suggest that this is a male-only phenomenon. Specifically, the author suggests that women perpetrate 20-35% of physical IPV. Given that Hamby's review is recent (2009) and reflects prior findings in the literature, the moderate asymmetry hypothesis should be adopted until disconfirmatory evidence is presented.

Typologies of Perpetrators of Violence

Much attention has been focused on identifying and defining types of perpetrators of IPV (Capaldi & Kim, 2007). In one of the most widely known typology, Holtzworth-Monroe and Stuart (1994) identified three subtypes (violent/antisocial, dysphoric/borderline, and family only) on the basis of where the perpetrator lay on three dimensions (severity and frequency of violence, whether the violence is constrained to the family, and presence of psychopathology).

Gottman and colleagues (1995) chose to typify perpetrators on the basis of their physiological reactivity during conflict. Although these perpetrator-focused typologies have each received some support (see Capaldi & Kim, 2007 for a review), there is a large push toward examining physical violence in intimate relationships as a dynamic and developmental process between partners. Violence and control as a dynamic and dyadic process is the ideology upon which this dissertation is based.

IPV and Negative Outcomes

IPV has been found to be negatively associated with the physical and psychological well-being of victims and with relationship satisfaction. A meta-analysis that examined the mental health outcomes of female victims after physical partner abuse found high rates of psychopathology. Golding (1999) found that 48% of victims of IPV experienced depression, 18% reported suicidality, 64% reported PTSD, 19% alcohol abuse, and 9% drug abuse. Coker and colleagues (2002) similarly examined the impact of both physical and psychological aggression on victims' physical and mental health in a U.S. sample of approximately 8,000 men and 8,000 women recruited via random digit dialing. Lifetime prevalence rates of physical IPV victimization in this sample were 13.3% for women and 5.8% for men, and lifetime prevalence rates of psychological IPV victimization were 12.1% for women and 17.3% for men. Psychological aggression was operationalized as including both verbal abuse and abuses of power and control (e.g., attempts to isolate the victim and restrictions placed on the victim's activities). Significantly more women than men endorsed items of psychological abuse victimization in the absence of physical or sexual IPV. Furthermore, regardless of gender, both physical and psychological victimization were associated with current poor health, the likelihood of having developed a chronic physical or mental illness, injury, depression, and substance use.

Interestingly, Coker and colleagues (2002) found that psychological abuse victimization was a stronger predictor of these outcomes than was physical abuse victimization, and that within psychological abuse, power and control were more strongly associated with these negative outcomes than was verbal abuse. These findings underscore the detrimental impact of psychological abuse, and in particular, controlling behaviours.

Relationship satisfaction also has been found to be affected by dating violence. In their study of high school students, Molidor and Tolman (1998) found that 64% of girls reported that their relationship worsened or ended after the onset of severe physical violence, whereas only 4% reported that their relationship improved. After the onset of moderate violence, relationships were reported to have improved in approximately 7% of cases and worsened or ended in approximately 56% of cases. Kaura and Lohman (2007) also found support for the association between dating violence and relationship satisfaction. In their sample of male and female undergraduate students, dating violence significantly predicted relationship satisfaction and mental health problems regardless of respondent gender. Thus, partner aggression victimization appears to be associated with a host of negative health, mental health, and relationship outcomes.

Gender Differences in Effects

Although there is now a plethora of evidence indicating that dating aggression (DA) is most often bidirectional and is perpetrated by men and women at approximately equal rates (see above), the consequences of violence may differ depending on the gender of the victim. In a sample of high school students who were asked to report on the effects of their self-identified worst experience of dating violence, 90% of boys indicated that the violence had either no effect or a little effect on them. In contrast, 48% of girls indicated that the violence resulted in serious

harm and 34% reported having experienced serious injury. Girls indicated experiencing no harm whatsoever in only 9% of cases (Molidor & Tolman, 1998).

A recent literature review by Caldwell, Swan, and Woodbrown (2012) examined gender differences in consequences of IPV across various domains. In terms of injury, almost all of the studies found more injuries among women than men. This difference was attributed to men in general being larger and stronger. Next, they examined differences in mental health following the onset of IPV. The studies they examined controlled for the expected gender differences in rates of psychopathology. Although there were mixed findings on rates of depression, the one consistent finding was that men were not more likely than women to experience depression after IPV. The reviewed studies were split between finding no gender differences in depression and finding higher rates of depression in women. Differences in posttraumatic stress disorder (PTSD) were found to be more consistent than differences in rates of depression. For the majority of the studies reviewed, women experienced higher rates of PTSD following IPV than did men after controlling for covariates such as previous mental illness and differences in base rates. Furthermore, Callahan, Tolman, and Saunders (2003) found that among girls who were victims of dating violence, injuries and both frequency and severity of dating violence predicted PTSD and dissociation even after controlling for demographic variables, family-of-origin aggression, and social desirability. Boys were less likely to experience PTSD than girls, although frequency, severity, and amount of injuries obtained as a result of being a victim of dating violence were still predictive of anxiety, depression, and PTSD for boys.

Katz and colleagues (2002) examined whether relationship satisfaction was differentially affected by dating violence depending on the gender of the victim. They compared ratings of relationship satisfaction following violence in their sample of 283 undergraduates. They found

that among men, partner violence was not associated with relationship satisfaction. Conversely, among women, there was a significant interaction between degree of commitment to the relationship and severity of partner violence such that for those women in serious relationships, partner violence was associated with lower levels of relationship satisfaction. This association was not found among women in less committed relationships.

In a replication of their study with a sample of 123 undergraduates, no decrease in relationship satisfaction was once again found among men following dating violence (Katz et al., 2002). This time, however, they found that women's relationship satisfaction decreased following violence regardless of relationship commitment. The authors hypothesized that men's satisfaction may not be affected by dating violence in the same way that women's satisfaction is because violence perpetrated by women may involve less intimidation and harm than male-perpetrated violence. They also speculate that violence may have less of an impact on relationship satisfaction for women in less committed relationships because they have invested less trust in their partners and therefore do not feel as much betrayal. High school boys also have been found to be significantly more likely to report that their relationship improved after physical violence than were girls (Molidor & Tolman, 1998). Another possible explanation for why violence may have more of a detrimental effect on relationship satisfaction for women than for men is that identity formation for women is more strongly tied to interpersonal factors, whereas male identity formation is based more on independence (Callahan et al., 2003).

Taken together, the results of the previous sections suggest that both victimization and perpetration of violence in dating relationships is highly prevalent among both men and women. However, studies also show that the consequences of victimization (i.e., injury, mental health outcomes) for women tend to be more impactful than for men. Moreover, current estimates of

partner aggression are likely biased as they are based on IPV measures that do not generally assess motivations for and consequences of IPV.

Stability of Physical Aggression across Time

As described earlier, 30-40% of all dating couples experience violence in their relationships. This rate is higher than the rate of 12% typically found when couples are assessed at the age of 40 years (Archer, 2000; Stets & Straus, 1989; Straus, 2008). These results point to a decrease in physical violence with age. Conversely, in his cross-national sample of dating aggression, Straus (2008) found that age was not associated with the amount of male-only or female-only violence. However, age was associated with the rate of bidirectional violence in that each additional year of age was associated with a small but significant decrease in bidirectional partner violence. By reviewing previous cross-sectional studies, O'Leary (1999) was able to make sense of these conflicting findings, determining that physical partner aggression tends to increase from the age of 15 to 25 years, at which point it declines. These results are consistent with a recent finding by Johnson, Giordano, Manning, and Longmore (2014), who examined the trajectory of physical violence perpetration longitudinally between the ages of 13-27. IPV perpetration peaked at the age of 21 for women, whereas it peaked around age 20 for men. Interestingly, Johnson and colleagues (2014) found that from ages 13-16, boys and girls were equally at risk for perpetrating dating violence, but that from age 17 years on, women exhibited higher rates than men.

Some studies have tested the stability of violence by examining violence across multiple time points. Based on a review of previous studies, Capaldi, Shortt, and Crosby (2003) asserted that there was a 50% chance that violence would be ongoing at any second assessment point if it was present at the first. Consistent with this finding, in their study of eighth and ninth grade

students, Fritz, O'Leary, and Foshee (2003) found that 62% of boys and 71% of girls who reported perpetration of physical violence against a partner also reported perpetrating violence against a partner at one or more assessment points over the next four or five years. However, both of these studies were limited by their use of dichotomous measures of physical violence, making it impossible to provide information on changes in the frequency and severity of violence.

A study by Capaldi and her colleagues (2003) provided more information on the stability of the frequency and severity of violence in a sample of high school seniors assessed 2.5 years apart. They found that persistence of violence perpetration occurred amongst 60% of men and 68% of women if they remained in the same relationship. When men were in a different relationship at the second assessment point 2.5 years later, significant stability in aggression was not observed. The fact that violence was found to be more stable within the same relationship than in a new relationship indicates that violence stability is more contingent on the interplay between partners than on characteristics within each partner. Amongst men, older age and longer relationships contributed significantly to the prediction of physical aggression at the second assessment point (Capaldi et al., 2003). The positive association between relationship length and physical violence was explained as representing a honeymoon period in the early stages of a relationship in which conflicts have yet to develop. Over time, as conflicts build up in a relationship due to improper methods of conflict management, couples may become more likely to resort to aggression. Furthermore, among men, amount of physical aggression increased significantly over time, pointing to an escalation of conflict. No increase in physical aggression was observed across time for female perpetrators. Whether violence continued when women

were in a different relationship at the assessment point could not be reported as these data were not collected.

Other studies have found high rates of stability in violence as well. In their sample of 188 married couples, Quigley and Leonard (1996) found that only 24% of men who had been violent at the first assessment were no longer violent two and three years later. Jacobson, Gottman, Gortner, Berns, and Shortt (1996) found that although 54% of their sample of 45 severely aggressive men significantly decreased their use of violence over Year 1, only one completely desisted. Similarly, aggression by husbands and wives was found to be stable over the first four years of marriage in a sample of 172 newlywed couples (Lawrence & Bradbury, 2007) and over a one-year period amongst 10th and 11th graders, especially among students who were with the same partners at both assessments (Fritz & Slep, 2009).

When considering stability across longer periods of time, Fritz and O'Leary (2004) examined reports of perpetrated violence by both husbands and wives as reported by the wife over a ten-year span. Measures were taken one month before marriage and then 6, 18, 30, and 120 months after marriage. Physical violence perpetrated by both wives and husbands decreased on average by one act per month (Fritz & O'Leary, 2004). Given that for the most part both partners were in their early twenties at the first assessment point and were followed over ten years, the observed decrease in violence is likely an age effect, consistent with previous findings indicating that violence tends to decrease (and most steeply) around the age of 25 years (O'Leary, 1999). Whereas violence perpetrated by the wives was more likely to decrease when initial severity of violence was high, this was not the case for violence perpetrated by husbands. Amongst husbands, use of severe physical aggression at the first assessment point was positively (though not significantly) associated with a steeper increase in the use of severe violence across

time than husbands with less severe violence at the initial assessment (Fritz & O'Leary, 2004). This trend of greater escalation of violence amongst those who started off with more severe violence is consistent with findings from previous studies (e.g., Aldarondo, 1996; Quigley & Leonard, 1996).

Given that much of the research supports stability of violence across time, a couple of theories have emerged to explain such stability. Some have argued that aggression is a personality trait that is stable rather than being context dependent (Kokko & Pulkkinen, 2005). This theory would suggest that if individuals are aggressive by nature, their aggression would be stable across relationships regardless of who their partners are. This was not the case in the two studies reviewed above that examined stability across relationships (Capaldi et al., 2003; Fritz & Slep, 2009). In both studies, violence decreased when a perpetrator changed partners across assessments, suggesting that dyadic factors may better account for violence between partners than individual characteristics. Dyadic factors may be understood in the context of coercion theory (Patterson, 1982) in that previous successful attempts at using violence to get what an individual wants from a particular partner would negatively reinforce the use of violence against that partner, increasing the likelihood of its future use. According to coercion theory, a learned pattern of interacting with the partner in a way that is characterized by violence is thus produced.

Stability of Psychological Aggression across Time

When examining psychological aggression longitudinally, stability has similarly been demonstrated. In fact, stability of psychological aggression was reported across a wide variety of samples and follow-up intervals, including studies with high-risk young adult couples across 2.5 years (Capaldi et al., 2003), severely aggressive men across a two-year span (Jacobson et al., 1996), high school students across one year (Fritz & Slep, 2009), and primarily young adult

couples who were initially engaged across the first 10 years of their marriage (Fritz & O'Leary, 2004).

When an adolescent sample was followed over a one-year period, Fritz and Slep (2009) also found stability of psychological aggression. Similar to physical aggression, stability of psychological aggression was greatest when the high school couple had stayed together after the initial assessment than when the high schooler was with a new partner (Fritz & Slep, 2009). Lastly, it should be noted that in their 10-year investigation of the course of partner aggression across time, Fritz and O'Leary (2004) found that perpetration of psychological aggression by both men and women was more likely to decrease across time when initial rates of psychological aggression were highest (Fritz & O'Leary, 2004). Together, these studies indicate that psychological aggression tends to remain stable over time.

Interplay between Physical and Psychological Aggression across Time

On the whole, the studies reviewed above support the stability of both physical and psychological aggression when age is controlled for—with a particularly strong effect for psychological aggression. Otherwise, it appears that as a result of the aging process, physical violence tends to decrease across time. This decrease in physical violence might be erroneously perceived as the relationship becoming healthier. Some argue that perpetrators may no longer need to use physical violence to control their partners, having increased their use of tactics of psychological abuse instead. This claim has received mixed support. Some consider the finding that psychological abuse tends to remain stable across time while physical abuse simultaneously decreases (when age is not controlled for) as support for this claim (Jacobson et al., 1996). Others consider the finding that psychological abuse does not seem to increase across time as evidence that this is not the case, viewing psychological abuse as a precursor to physical violence

instead (Aldarondo, 1996; Capaldi et al., 2003). Further support for this latter theory comes from a study by Murphy and O'Leary (1989), which found that participants' partners' psychological aggression significantly predicted participants' and partners' use of physical aggression. It should be noted, however, that Murphy and O'Leary's (1989) sample consisted of newly married individuals, and therefore may not generalize to newly dating couples. Additional longitudinal research examining both psychological and physical aggression simultaneously is necessary to assess which of these theories best describes the trajectory of these behaviours.

Coercive Control

Prior to the 1970s, the symptoms of psychological distress reported by victims of IPV were assumed to be a result of the physical violence that the victim experienced. However, the initial impetus towards looking beyond physical violence to explain the effects of IPV arose in the 1970s from the anecdotal testimonies of women residing in battered women's shelters (Stark, 2007). The accounts of these women usually centered on the complete loss of freedom they had experienced as the relationship progressed. Many of the women identified that "violence wasn't the worst part" of their abusive relationships (Stark, 2007, p.12). The experiences of these women began to be compared to those who had been kidnapped or brain washed, and clinicians began to note the toll that controlling behaviours took on victims. This emphasis on control resulted in an expansion of the conceptualization of IPV, with clinicians beginning to incorporate tactics of control into their models of IPV.

One such model that incorporates tactics of control into the IPV experience that has become widely used in education and batterer intervention programs is the Power and Control Wheel created by Pence and Paymar (1993) for the Duluth Domestic Abuse Intervention Project. The wheel views violence and tactics of control such as isolation, economic abuse, and threats as

attempts to gain power in the relationship. The wheel is mainly used as a psychoeducational tool to aid women to expand their own definitions of what constitutes abuse so that they can recognize these tactics in their own relationships.

It was not until the middle of the 1990s that researchers began to incorporate the notion of control into the study of IPV. Despite the fairly widespread acceptance by clinicians of the detrimental effects of being over-controlled by a partner on victims' mental health, researchers were slow to adopt this notion and to operationalize it. As such, little empirical research has examined this construct, and hence little evidence has been produced to help guide legal and political policies (Dutton, Goodman, & Schmidt, 2005). Given that the few studies that have examined control have found that 50-80% of victims that seek help for IPV do so on account of the control tactics used against them, there is a great need to understand the mechanisms of control in intimate relationships and their effects on the victim (Stark, 2007). In response to this need, the term, *coercive control* (CC), has recently been operationalized to describe the broad pattern of behaviours aimed at exerting power over an individual, and once that power has been obtained, displaying it (Stark, 2007). Its fit within a broader picture of IPV has just begun to be conceptualized as well.

CC in the Context of IPV

Dutton and Goodman (2005) used the social power model by French and Raven (1959) described above to create a model of CC in IPV. They argued for the need to examine CC distinctly from psychological abuse, asserting that measures of psychological abuse do not take into account the ability of the abusive act to actually control the partner. Therefore, the main thing that distinguishes an act of coercive control from other abusive behaviours (e.g., psychological abuse) is that the act must serve as a threat for future acts of noncompliance. As

described, compliance depends on individuals' beliefs that if they do not obey their partners' demands, they will face negative consequences. This permits the individual the choice of whether to comply or not, although this choice comes at a cost. In order to enforce the threatened consequence, the individual must have a means of determining whether the demand was in fact obeyed. This must be accomplished through surveillance, a necessary component of CC according to Dutton and Goodman's (2005) model.

According to Dutton and Goodman's (2005) model, the actions and reactions of both the perpetrator and the victim with relation to CC cannot be understood without examining the context (or social ecology) within which it occurs. This includes political, economic, and individual factors that have an impact on the actions of the individual and on the way that their partner receives those actions. Factors that influence whether a behaviour is coercive include whether it is appropriate to a given situation and how congruent the act is with societal norms governing that behaviour. Consistent with Dutton and Goodman's (2005) model of CC, Stark (2007) also argues that the way that tactics of CC play out within a given relationship cannot be understood without examining the societal context of control in which the relationship takes place. As such, gender roles must be included in any analysis of CC. Some have argued that because women are in a position of decreased power within the greater patriarchal social structure compared to men, women are particularly vulnerable to having that imbalance play out in their personal relationships (Franklin & Menaker, 2014). Prior to the 20th century, women held an even more disadvantaged role in society, with the widely-accepted notion of men holding the power both in society and within intimate relationships. Women were expected to be submissive to the will of the men in their lives, deferring to them for decisions and relying on them for satisfying their financial needs (Ali & Naylor, 2013). Given that this notion was largely accepted

by men and women alike, intentional tactics of control were not necessary for maintaining the power in the relationship. However, as a result of the rise of capitalism and the women's liberation movement in the latter part of the 20th century, strict gender roles began to relax, resulting in a mismatch between traditional views regarding men holding greater power in intimate relationships and women having greater access to resources (e.g., money, birth control; Dobash & Dobash, 1992). It has been theorized that the current persistence of CC may actually constitute a backlash effect in which men attempt to hold firmly onto the power they have in their relationships given that their overall sense of power is being threatened by their partner's increase in power in society (Stark, 2007). This would account for the prevalent use of economic abuse as a tactic of CC. When the victim is allowed to work to earn money, her financial earnings are often collected and withheld by her partner, re-establishing the role of the man as solely in charge of finances.

Although gender should not be ignored when examining power imbalances in relationships, it must be noted that gender is not sufficient in and of itself to explain the use of physical or psychological violence. The majority of men in intimate relationships do not create an environment characterized by CC, and examples can be found of women utilizing tactics of CC. The gender of the participants is but one of the factors that must be considered when analyzing abusive or nonabusive interactions within a relationship. As described above, other factors worth examining include personal characteristics of both partners and contextual factors around the incident.

Each individual's prior behaviour must also be considered when examining the influence of tactics of CC. Coercive control often involves a period of "setting the stage," or setting up the context in which the control occurs. This is enacted in four ways. The first is through actions

directed toward the victim or others during which the threatened consequences for noncompliance are demonstrated. This serves the purpose of showing the victim that the threat is serious and the perpetrator has no qualms about following through on the threat again in the future, which serves to strengthen the motivational value of the threat. Alternatively, the credibility of this threat can be validated through statements that make it more believable that the perpetrator has the means to commit the threatened action (e.g., providing details on how and when the threatened violence will occur). A second component of setting the stage involves creating or exploiting the victim's vulnerabilities. As can be seen in the section describing the target's behaviour, each individual has their own existing vulnerability to coercion. These vulnerabilities cover many domains, including illness, illegal immigrant status, language barriers, and personality factors. Third, actions that decrease the availability of resources available to the victim (e.g., by driving victims away from social supports) can also serve to set the stage. A fourth means of increasing the victim's vulnerability to CC is by increasing the emotional attachment that the victim has on the perpetrator. As described earlier, the more emotionally dependent one partner is on the other, the more power the less emotionally dependent partner has over the dependent partner. An example of this would be injuring the victim and then taking them to the doctor, while reinforcing that they are the only one who would do that for the victim. This fosters further dependence on the perpetrator.

Once the stage has been set, the demand can be made with its associated threat. This demand is usually communicated in a way that implies that the perpetrator is entitled to that demand being met. The demand itself can be explicitly or implicitly stated and verbal or nonverbal. The threat itself must be credible as well. In order for the demand to be credible, there must be some means for the perpetrator to see whether the victim complied with the demand.

Therefore, as mentioned above, surveillance is a component of CC. Surveillance can involve frequently checking up on the victim, inspecting objects that would provide clues as to the victim's activities (e.g., odometer, receipts), and using third party reports to corroborate stories. Regardless of whether these methods of surveillance are actually being used, it is the victim's perception that they are being used that is important in CC. Taken together, the predisposing factors, demands, associated threats for noncompliance, and methods of surveillance provide the antecedents for acts of physical violence should noncompliance be perceived. This violence, in turn, increases the likelihood of future compliance.

As stated above, for a threat to be effective, it must be perceived as credible by the victim. It is thus important to consider the process through which the victim perceives the threat. This involves a risk assessment that can be cognitive and /or emotional in nature. Research reviewed by Dutton and Goodman (2005) has found that cognitive assessment is based on a number of factors, including abuser characteristics, social support, and severity of previous violence. Affect is also influential in risk assessment in that increased fear may focus victims' attention on immediate danger rather than long term consequences, making victims more likely to comply with demands. Once these factors have been considered, a decision on whether to comply or to not comply is made. When noncompliance is the chosen behaviour, this can be communicated directly to the perpetrator, or it can be ascertained indirectly. The final component of the model of CC is the consequences of the CC, which as described earlier, can include negative mental and physical health outcomes.

CC and Models of IPV

The existence or nonexistence of CC has been used as the distinguishing factor in a typology of IPV developed by Johnson (1995). According to Johnson, violent relationships can

be situated on two dimensions: whether the violence is one-sided or mutual and whether or not the motivation for the violence is to increase overall power in the relationship. The two main types of IPV that have been proposed and that have received the most investigation are *intimate terrorism (IT)* and *situational couple violence (SCV).* A relationship classified as IT is one in which one partner, usually the man, uses tactics of CC to dominate the victim across situations. Here the violence is used as a means of obtaining control over the victim across situations. In contrast, in SCV, the violence is seen as an attempt to gain control over a specific situation (e.g., in a particular conflict). Therefore, in SCV the violence is seen as an escalation that occurs in a conflict situation and is usually perpetrated by both partners. Factor analyses of multiple datasets have found support for Johnson's (1995) model (Graham-Kevan & Archer, 2003; Macmillan & Gartner, 1999). It has consistently been found that the violence in IT is more severe than that observed in SCV, usually escalating over time and being associated with more injuries and negative psychological outcomes for victims (Graham-Kevan & Archer, 2003; Johnson & Leone, 2005; Leone, Johnson, Cohan, & Lloyd, 2004). The empirical investigation of Johnson's (1995) typology has provided the foundation for bridging the gap between the acceptance of CC in clinical practice and research in the field of IPV.

Dating Aggression and CC

Given that the field of DA has tended to lag behind that of IPV and that CC has only recently been examined with regards to its role in IPV, CC is only in the early stages of being examined within the context of DA. Straus' (2008) study of DA in 32 countries also examined attitudes of dominance (comprised of three different forms of dominance—authority, restrictiveness, and disparagement) and their relation to violence. Straus found that for every one point increase in male domination on a four-point scale, the probability of male-only violence

increased 2.29 times. Each point increase in male dominance also resulted in a two-fold increase in female-only violence. Finally, a one-point increase in male dominance led to a three-fold increase in bidirectional violence. When examining the relation between female dominance and partner aggression, Straus (2008) found that female dominance as reported by the women resulted in 2.5 times the probability of male-only violence, 3.5 times the likelihood of female-only violence, and a 4.2 time increase in bidirectional violence.

When looking only at severe violence, male dominance and female dominance were both associated with a five-fold increase in severe male-only violence (Straus, 2008). Male dominance was associated with a 1.7 time increase in severe female-only violence, and female dominance increased the chance of severe female-only violence by four times. Male dominance increased the likelihood of severe bidirectional violence by 4.5 times and female dominance increased the odds of severe bidirectional violence by 5.7 times. Together, these results indicate that although male dominance does increase the likelihood of all types of violence, female dominance has an even greater amplification effect on all types of violence (with the exception of severe male-only violence). Moreover, in all cases, dominance appears to be a strong predictor of dating aggression.

Tanha, Beck, Figueredo, and Raghavan (2009) conceptualized CC as a motivator for IPV and created a model to test this assertion. Questionnaires were administered to 762 couples undergoing divorce mediation. The authors tested a structural equation model demonstrating a direct effect of CC on a latent variable of Victimization, which was comprised of the manifest variables: psychological abuse, sexual assault, intimidation and coercion, physical abuse, and severe threats and escalated physical violence. The path between CC experienced by women and physical abuse was also significant, providing support for the authors' hypothesis that CC is a

motivator for physical violence used with the intent of gaining control over the victim. There were some significant limitations of this study, however, that must be noted. First, the "four" victimization types contained several subtypes. With only 41 items on the whole measure, fewer than ten items were used to capture each construct. Second, because the sample of this study was comprised of married couples with children undergoing divorce proceedings, results may not be generalizable to dating couples. Third, Tanha and colleagues (2009) did not test for and compare the fit of alternative models. For instance, they did not examine whether the effect of Victimization on CC also was significant (i.e., the alternate explanation that use of physical partner violence creates a means for exerting and maintaining CC) and if such a model would have provided a better fit. As such, it is possible that their data may have fit the alternative model as well, casting doubt on the direction of the observed effects.

Summary

Together, the research reviewed above supports the existence of a link between CC and IPV. More specifically, the model of CC and IPV proposed by Dutton and Goodman (2005) views physical violence as an act that is designed to increase compliance to a demand, occurring within the larger context of coercive control. This idea is also consistent with results reported by Tanha et al. (2009). Although Dutton and Goodman's (2005) theory is beginning to receive attention, there is still much to be known about the relation between physical violence and CC.

For instance, although the concept of CC has begun to be examined with respect to its role in partner violence among married couples, there is a dearth of research on CC amongst dating couples. In light of the research on relationship development reviewed above, it is unlikely that the processes involved in partner violence and control would operate the same way

among couples at the beginning of their relationships compared to couples who are already married.

Additionally, no known studies have examined CC and physical partner violence longitudinally, nor the way in which they are related over time. The longitudinal studies that have already been conducted in this area have instead focused on the stability of physical aggression and psychological aggression over time, again usually among married couples. For the most part, psychological aggression has been found to be relatively stable, but physical partner violence appears to decrease over time due to age effects. However, it remains unclear how soon into the start of a relationship tactics of CC and physical violence begin and the way in which each change over time. Moreover, surprisingly, no known studies to date have examined prospectively the onset of partner aggression or coercive control from the start of couples' romantic relationships. Thus, very little is known about when, on average, partner aggressive and controlling behaviours first emerge, and the process by which they develop. Furthermore, the lack of longitudinal studies on CC and physical violence have rendered it impossible to examine the way in which these processes are related to each other and influence each other.

Study Objectives

The current study was designed to meet three main objectives. The first objective was to determine the way in which coercive control and physical violence each change over time in the first few months of dating relationships. Two separate growth curve models (one for CC and one for physical violence) were constructed to explore the following research questions: (a) Do CC and physical violence occur at a significant rate at the first time point? (b) Do CC and physical dating violence tend to be stable across time, or do they increase/decrease during the first six months of a relationship? and (c) Are initial levels of the variables of interest (i.e., CC and

physical dating violence) associated with the rate with which they each change over time? Given the lack of previous studies on the onset and developmental course of CC and physical dating aggression in the early stages of dating relationships, no specific hypotheses for this set of research questions were developed *a priori*.

Given that CC has only recently been acknowledged as its own construct, the development of IPV and CC has yet to be studied across time concurrently in the same sample. As such, the second objective of this study was to examine the relationship between CC and physical violence across the study period. Using cross-domain growth curve analysis, the present study investigated whether CC and physical violence change over time in the same direction and at similar rates, and whether high rates of each variable at Wave 1 are associated with changes in the other variable. No specific predictions were made for these analyses given the paucity of research in this area. An additional question of interest was whether CC or physical violence begins first. Consistent with Dutton and Goodman's (2005) theory of coercive control, which states that physical violence is used to reinforce compliance to demands that are made prior to the violence, it was hypothesized that CC would begin prior to physical violence. An autoregressive model that included all three time points of each variable also was created with the goal of determining whether prior acts of CC were better able to predict subsequent physical violence, or whether physical violence at one time point was better able to predict CC at the next time point. Consistent with Tanha and colleagues' (2009) findings, it was hypothesized that CC would be a stronger predictor of physical violence than physical violence would be as a predictor of CC.

Finally, given the relatively recent emergence of CC as a variable of interest in IPV, qualitative information on how individuals in newly emerging relationships view CC with

respect to their own relationship was collected to help guide the field and to provide questions for future studies to address. The present study thus examined university students' reports of positive and negative events in their relationship, as well as perceptions of the role that control has played in their own relationships and of its relation, if any, to physical partner violence.

In order to attain these objectives, the current study collected data on newly-emerging relationships at three time points, each separated by two-month intervals. This assessment schedule allowed for information to be provided about CC and IPV over the first six months of a dating relationship, an understudied time period. Given that no previous research has determined the average length of time before controlling and/or aggressive behaviours first begin in romantic relationships, two-month intervals were selected with the hopes that the intervals would be short enough for participants to accurately remember how frequently various controlling and aggressive behaviours had occurred, but large enough to capture the onset of CC and dating aggression in participants' newly established relationships.

To correct for previous methodological flaws described by Capaldi and colleagues (2003), violence was measured with continuous variables rather than dichotomously. A detailed measure of CC based on the model described by Dutton and Goodman (2005) also provided a more comprehensive view of CC than has previously been used.

From a theoretical standpoint, it is critical to our conceptualization of unhealthy dating relationships to understand the mechanisms through which physical violence arises, including the function it serves. By following individuals who are newly beginning their relationships, the present study provided information on both violent and nonviolent relationship processes and the ways in which CC is experienced over the first six months of a romantic relationship. The results of this study will thus be able to inform dating aggression prevention initiatives.

CHAPTER 2

Methods

Participants

Two hundred and fifty four women enrolled in undergraduate studies at a mid-sized university in southwest Ontario participated in the first wave of this study. To be eligible for the study, each participant had to be in a romantic relationship (as defined by the participant) that began less than two months ago. Given the longitudinal nature of the current study, of the 254 women who participated in Wave 1, 145 (57%) participated in Wave 2, and 141 (56%) participated in Wave 3 of the study. One hundred and seventeen (46%) women completed all three waves of the study. To limit the amount of missing data, participants were retained for analysis if they participated in at least two waves of data collection (n = 165). The amount of physical intimate partner violence or CC at Wave 1 was not found to differ significantly between women who completed the first wave of the study only and women who were retained for analysis, $t(243) = -0.06$, $p = .84$ and $t(101) = -0.08$, $p = .94$, respectively. Social desirability also did not differ significantly between women who completed the first wave of the study only and women who were retained for analysis, $t(238) = 0.73$, $p = .47$.

Participants ranged in age from 17-35 years with a median age of 20 (*IQR*= 21-19) years. The majority of the sample was White (65%) and heterosexual (95%), although all women reported that their current dating partner was male. The women most often reported having an annual income below $20,000 (81%). On average, participants reported that they began dating at 15.7 (SD = 2.0) years old. Thirteen percent of participants identified that they had been in a physically abusive relationship in the past, with 3% indicating that they had reported their partners' violence to the police. Similarly, 2.5% reported that they themselves had been reported to the police for having used violence against an intimate partner. Most participants reported that

they spent an average of three to four hours per week dating. When asked to classify their relationship with their current partner at the start of the study, participants most often described their dating relationships as committed (34%), followed by casual (28%) and exclusive (36%). Fifty-three percent of women reported that their relationships involved sex. Respondents reported a median of four (*IQR* = 7-3) previous dating partners. Table 1 presents the demographic characteristics of women in the current sample.

Table 1

Summary of Participants' (n = 165) Demographic Information

Demographic variable	Mean (***SD***) or Percentage (%)
Age	20.39 (2.54)
Years in university	2.56 (1.14)
Psychology major	Yes: 52.4%
Ethnicity	White: 65% Arab/Middle Eastern: 11% Black: 6.7% Multiethnic: 4.9% East Asian: 3.7% South Asian: 3.7% Other: 3.1% Aboriginal: 1.8%
Religion	Roman Catholic: 36.2% Protestant: 15.3% Muslim: 12.3% Agnostic: 10.4% Other: 8.6% Atheist: 6.7% Evangelical: 5.5% Mixed: 3.1% Buddhist: 1.2% Hindu: 0.6%

Sexual orientation	Heterosexual: 96.4% Bisexual: 3.6%
Living with	Parents/family: 66.5% Roommate: 20.7% Alone: 7.3% Dating partner: 3.0% Other: 2.4%
Therapy history	None 81.8% Individual therapy: 14.5% Couples therapy: 2.4% Family therapy: 1.2%
Number of prior dating partners	5.68 (4.95)
Age of dating onset	15.72 (2.00) years
Prior abusive relationship	No: 88.5% Yes: 11.5%
Reported partner to police for IPV perpetration	No: 97.0% Yes: 3.0%
Been reported to police for IPV perpetration	No: 97.5% Yes: 2.5%
Hours spent dating per week	0: 9.7% 1-2: 17.6% 3-4: 30.3% 5-6: 17.0% 7 or more: 25.5%

Note. IPV = intimate partner violence.

Measures

Basic demographics. The demographic questionnaire consists of questions inquiring about participants' age, year and program of study, ethnicity, sexual orientation, religious affiliation, income, and living situation (see Appendix A). The full demographic questionnaire

was administered at the first assessment only. Participants were also asked about their prior dating history, including the number and length of prior intimate relationships, whether or not prior relationships involved dating aggression, and number of prior sexual partners. In addition, they were asked questions about their current relationship, such as length of time dating, number of hours spent together per week, sexual experience, and cohabitation status.

Physical dating violence. The Revised Conflict Tactics Scales (CTS2; Straus, Hamby, Boney-McCoy, & Sugarman, 1996), the most widely used measure of partner aggression, was used to collect information on instances of physical dating violence within respondents' dating relationship within the last two months. The scale asks about experiences of victimization as well as perpetration, although only victimization data will be examined in the present study. Respondents rated on a scale of 0 (*never*) to 6 (*more than 20 times*) how many times the act occurred in the indicated time period (i.e., the last 2 months or since the beginning of participants' relationships for Wave 1 women who had been dating their current partners for less than 2 months). The measure consists of five subscales, corresponding to injury (6 items), psychological aggression (8 items), sexual coercion (7 items), negotiation (6 items), and physical assault (12 items; e.g., "Choked my partner"). The whole measure was given to each participant; however, the present study focused on the physical assault subscale only. The scores on the physical assault scale were summed and used as a measure of physical violence frequency within the past year. The internal consistency of the physical assault subscale has been reported to be .86 in past studies (Straus et al., 1996). This scale also has demonstrated convergent and divergent validity (Straus et al., 1996). The internal consistency of the physical assault subscale in the current sample was .95.

Coercive control. The Coercion in Intimate Partner Relationships (CIPR; Dutton et al., 2005) was used to measure the components of coercive control as theorized by Dutton et al. (2005) in separate subscales, namely: Demands, Surveillance, and Coercion/Threats. The participant first responded to all of the scales as the victim of CC and then answered the same questions with regards to their perpetration. Across all scales, the participant indicated *yes* (1) if the behaviour had been present in the relationship for the indicated period (i.e., last 2 months or since the beginning of participants' relationships for Wave 1 women who had been dating their current partners for less than 2 months) or *no* (0) if it had not been.

Forty-eight items assessed demands made by each partner. This demand scale consists of nine subscales: Personal Activities (10 items), Support/Social Life/Family (6 items), Household (3 items), Work/Economic/Resources (5 items), Health (4 items), Intimate Relationship (8 items), Legal (4 items), Immigration (3 items only to be completed if the respondent is an immigrant to Canada), and Children/Parenting (5 items only to be completed if the respondent has children). An example of an item on this scale is "In the last 2 months of your current relationship, did your partner demand something related to maintaining a certain weight?"

The Surveillance scale consists of 31 items assessing methods of determining whether the partner has complied with the demands made. Participants were asked to select *yes* if their partner had used a certain method of surveillance, such as "Kept track of telephone/cell phone use." This scale is not divided into subscales.

The next section of the CIPR, Coercion (or Threats as this scale will be referred to for the remainder of this dissertation), assessed the threatened consequence for not complying with the partner's demands. The coercion scale consists of three subscales: Harm to You (25 items), Harm to Partner (2 items), and Harm to Others (3 items). An example of an item on this scale is

"In the last 2 months of your current relationship, did your partner make you think that he/she might destroy or take something that belongs to you if you didn't do what he/she wanted?" A fourth scale that consists of only one question asked whether the perpetrator threatened to involve a third individual to carry out the threat.

The items on the CIPR were derived by a panel of experts in the field of intimate partner violence. It was then validated in a large study that took place in Boston and Washington, D.C., using participants from courts, colleges, social service programs, and public gatherings. Internal consistency was found to be .86 or higher for the Demands, Surveillance, and Threat scales when the respondent was answering both as the victim and the perpetrator of CC (Dutton et al., 2005). Support for the convergent validity of the CIPR has been established through significant associations between the Coercion scale and the Demand and Surveillance scales of the CIPR and independent measures of psychological and physical IPV. Predictive validity also was supported with this measure significantly predicting posttraumatic stress disorder, depression, IPV threat appraisal, and fear (Dutton et al., 2005). All of these outcomes were significantly predicted even when controlling for physical IPV with the exception of depression, demonstrating that the CIPR is not a general measure of distress. These associations held regardless of respondents' gender (Dutton et al., 2005). In the current sample, internal reliability coefficients across the three waves were .93, .92, and .93 for the Demand scale; .98, .81, and .81 for the Threat scale; and.81, .62, and .76 for the Surveillance scale, respectively. When combined into a total coercive control score, internal reliability was .97, .93, and .95, respectively.

S**ocial desirability.** The Marlowe-Crowne Social Desirability Scale Short Form C (MCSDS Form C; Reynolds, 1982) is a widely used scale to assess the extent to which the participant is responding in a socially desirable manner. This measure consists of 13 items to

which the participant responds either *true* (1) or *false* (0). An example of an item on this scale is "There have been occasions when I took advantage of someone" (see Appendix B).

Support for the use of a measure of social desirability when studying dating violence comes from a study by Straus (2008) which found that students who scored highly on a measure of social desirability were much less likely to disclose violence in their current relationship. This scale was found to have an internal reliability of .67 among undergraduate students (Reynolds, 1982). Similarly, internal reliability in the present sample was .69.

Qualitative questionnaire. At the first and second assessment, participants were asked the following open-ended questions: (a) "Over the last two months, what was the best thing that happened in your relationship? Please describe.*"* and (b) "Over the last two months, what was the worst thing that happened in your relationship? Please describe."

At the third assessment only, participants were asked to describe their experiences of coercive control in their own words in response to five qualitative questions (see Appendix C). They were asked to describe the role that control has played in their relationship, the impact that coercive control has had on their relationship, and whether they believe that control has contributed to physical violence in their romantic relationship. Participants typed their responses to these questions into empty text boxes with unlimited space below each question.

Procedure

Undergraduate women were recruited using an advertisement placed on the Psychology participant pool website at the University of Windsor (see Appendix D). The participant pool is a sample of undergraduate students who receive bonus points in participating psychology and business courses in exchange for their participation in research studies being conducted in these departments. The women were provided with a description of the study, the length of time required for participation, compensation, and the full inclusion criteria for participation (i.e., that

they have been dating their male partner for two months or less). When students signed up to participate, they were emailed a link to the online survey, which was hosted by an external server (www.fluidsurveys.com). The women were assigned a user identification number which was required to complete parts two and three of the study. Once students logged into the online survey, they were presented with the consent form, which outlined the benefits and possible risks involved in participating and authorized the researcher to contact the participant when it was time for Waves 2 and 3 (see Appendix D). Upon consenting to participate, participants began the survey. At Wave 1, participants completed the demographics questionnaire, the CTS-2, the CIPR, the MCSDS Form C, and two qualitative questions. The questionnaires were administered in this order. Next, they were provided with a list of community resources (Appendix E). Lastly, they were provided with instructions on web safety such as how to delete browser history (Appendix F). For participation in Wave 1, participants received one credit through the participant pool.

Two months after completion of the first survey, participants were contacted by email to ask whether they were still in the same dating relationship as at Wave 1, and if so, whether they wished to participate in Wave 2. The email also contained the link to the Wave 2 survey, which consisted of the questions from the demographic questionnaire that assess the seriousness of and commitment to the relationship and whether sex is a part of the relationship, as well as the CTS-2, the CIPR, and the two qualitative questions. They were again provided with the community resource list and web safety instructions. For participating in Wave 2, participants were given the choice of receiving either an additional participant pool credit or $5.

Two months after completion of Wave 2, participants received an email asking whether they were still in the same dating relationship as the earlier two waves, and if so, whether they

wished to participate in the final wave of the study. This email included the link to the third wave of the survey, which again consisted of the relationship questions, the CTS-2, the CIPR, and the five qualitative questionnaires. At the end of the study, participants received a debriefing form providing more information on the purpose of the study (Appendix G), the list of resources, and instructions on how to clear their web browsers. For participating in Wave 3, participants were given the choice of receiving either an additional participant pool credit or $10.

If participants responded to the Wave 2 email to report that they were no longer in the same relationship, the researcher made note of this information, and thanked the participant for informing them. They were then no longer considered to be eligible for the study, and were not contacted to participate in Wave 3. If the participant simply did not reply to the initial Wave 2 email (or the subsequent reminder email), they were retained in the study and were contacted to participate in Wave 3. If they participated in Wave 3, their data from Wave 2 were considered missing. Therefore, it was possible for participants to have data from all three waves, just Waves 1 and 2, or just Waves 1 and 3.

Data Analysis

Quantitative analyses. Quantitative analyses were used to achieve two of the specific objectives of this study. Prior to evaluating the primary research questions, data underwent preliminary analyses. Items on measures of social desirability, CC, and IPV were summed to create separate composite scores for each variable at each time point (with the exception of social desirability which was only assessed at Wave 1). Descriptive information on indicators of relationship progression was examined over the three waves. In addition, preliminary correlational analyses were calculated among social desirability, IPV, and CC at each time point to determine whether it would be advisable to include social desirability as a covariate in primary

analyses. The pattern of missing data also was inspected to determine the best method of management, as recommended by Tabachnick and Fidell (2013). Lastly, assumptions of structural equation modelling (SEM) were verified.

The first objective of the current study was to determine the way in which coercive control and IPV each change over time. Growth curve analyses were used to track the changes in physical violence and coercive control across the six-month period, after controlling for social desirability. The mean intercept and slope of each variable (CC and physical violence) were examined to determine the initial level and rate and direction of change of each variable across the sample. The variance of the slope and intercepts provided information as to how much heterogeneity there was between individuals. A growth plot of the means of participants' physical violence and CC was created to determine the usual pattern of each variable over time. Correlations between the intercept of CC and its slope and the intercept for physical violence and its slope also provided information on whether higher initial levels of each variable were associated with a steeper increase or decrease of that same variable over time (Kline, 2012).

This study's second objective, which was to examine the influence of CC and physical violence on each other during the first six months of participants' romantic relationships, was accomplished using two separate SEM models (i.e., a parallel process growth curve model and an autoregressive model), each controlling for social desirability. Parallel process growth curve modelling allows the curves of more than one variable (i.e., physical violence and coercive control) measured at the same time points to be analyzed simultaneously, and therefore was most appropriate to examine the ways that the starting points and rate of change of CC and physical violence influence each other (Berrington, Smith, & Sturgis, 2006). Using this method, cross-domain change, or the examination of the relation between the intercept and slope of one

variable's curve and the intercept and slope of the second variable's curve, can be examined (Berrington, Smith, & Sturgis, 2006). Correlations between the intercepts and slopes of coercive control and physical violence, as well as between the slopes of each variable and the other variable's intercept were calculated.

Autoregressive models, also known as cross-lagged panel designs, provide a method of examining the way in which two variables of interest change over time (Berrington, Smith, & Sturgis, 2006). A three wave, two variable autoregressive model (depicted in Figure 1) was used to determine whether each of the variables at a given time point (e.g., CC at Wave 1) was associated with the other variable at a subsequent time point (e.g., IPV at Wave 2) as well as which variable more strongly influenced subsequent time points of the other.

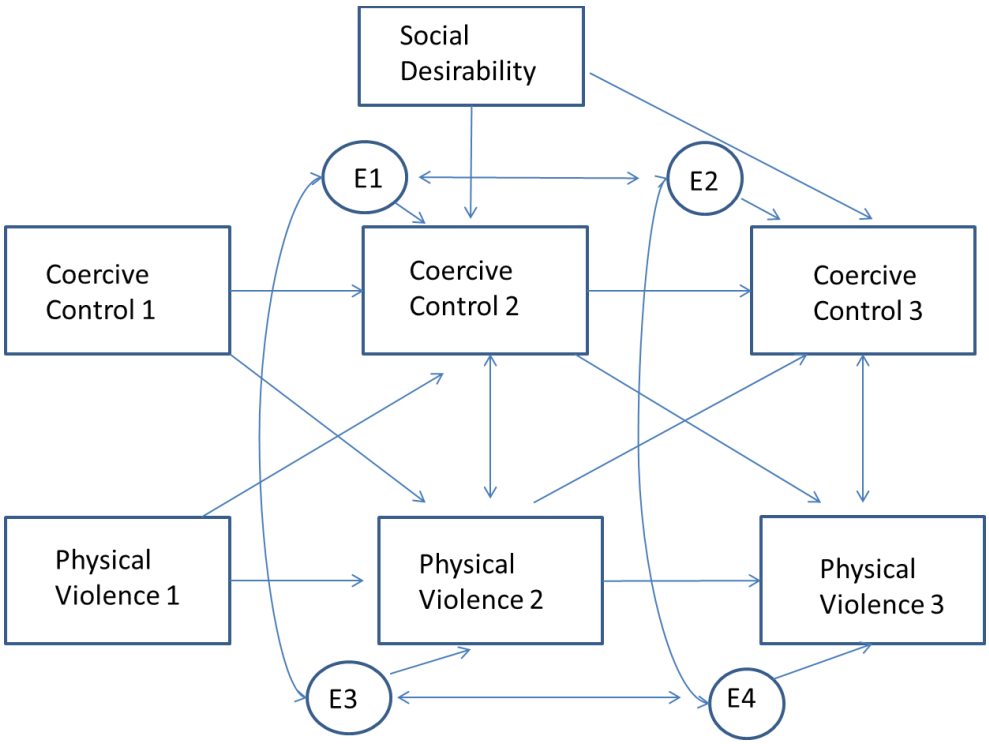


Figure 1. Autoregressive model of coercive control and physical dating violence at all three waves, controlling for social desirability.

Auto-regressive paths (e.g., between CC1 and CC2, IPV1 and IPV2) describe whether there is stability in individual differences (but not within-person stability) on CC and physical violence across the three waves (Selig & Little, 2012). Cross-lagged paths (e.g., CC1 to IPV2) describe the influence of one variable (e.g. CC at Wave 1) on the next measurement occasion of the second variable (e.g., IPV at Wave 2), while controlling for previous levels of the second variable (e.g., IPV1; Selig & Little, 2012). Statistical significance of these paths was examined to determine whether stability was evident, and which variable had a greater influence on future instances of the other variable. Residuals at each time point were correlated (denoted by the curved arrows in Figure 1) as it was anticipated that measurement error would be correlated, and higher-order effects were included to increase model fit (Geiser, 2010).

The decision to include the trajectories of all participants, as opposed to only the participants who reported some violence in their relationship, was made intentionally so as to gain the best understanding of the course of violence and control for the average couple who has just started dating, rather than a subgroup of only violent couples. As well, if only data on physically violent relationships were retained, we would be missing out on patterns of coercive control in the absence of physical violence.

Qualitative analyses. The current study's third objective was to obtain qualitative information on how individuals in newly emerging relationships view CC with respect to their own relationship and in relation to violence. Thematic analysis was the framework selected to analyze the qualitative responses. Thematic analysis is a flexible approach to analysis of open ended questions that aspires to identify patterns in the data across responses. It is a flexible approach that is not bound by a preimposed theory on the constructs examined. Within the thematic analysis, an inductive approach was used in which data were analyzed without a

predetermined coding scheme. Data were analyzed at the semantic level, as the primary purpose of analysis was to gather participants' perceptions of CC and dating violence within their own relationships, and not to develop an underlying theory of CC and dating violence. For a detailed description of thematic analysis, please refer to Braun and Clarke (2006).

Consistent with the guidelines of Braun and Clarke (2006), a recursive, six-phase process of data analysis was undertaken. First, each response was read twice by the investigator so that familiarization with the data occurred. Second, initial codes were created by identifying the main points of each response. Third, related codes were grouped into themes, and the data were re-examined for any previously unidentified responses that fit with the themes. Fourth, the themes were reviewed to ensure that each of the extracts identified as part of a theme were indeed consistent with the theme. Fifth, themes were named and subthemes were organized. Last, data extracts for each theme were selected and the results were reported.

CHAPTER 3

Results

Preliminary Analyses

Missing data. Little's missing completely at random (MCAR) test was significant $\chi^2(74) = 124.17$, $p < .001$, indicating that the data were not missing completely at random. Initially, the MLR (i.e., maximum likelihood estimation with robust standard errors) command was used in Mplus version 6.1 (Muthén & Muthén, 2010) to impute missing data at the item level (as opposed to imputing at the composite level). When the data failed to converge, the multiple imputation command (i.e., IMPUTE) was used at the item level, but also failed to converge. Individual items on each scale were then summed to create composite scores, and MLR was attempted for missing scale scores, but the matrix was found to not be positive definite. Finally, multiple imputation successfully converged at the construct level and was positive definite. Given that the recommended approach for missing data is multiple imputation according to Sterne et al. (2009) anyway, and that datasets did not converge when expectation maximization was attempted in SPSS version 22.0, missing data were imputed using the multiple imputation command in Mplus with 10 datasets and 10 iterations for all major analyses.

Statistical assumptions. The four data-related assumptions described in Kline (2012) were addressed. First, scores should be independent and variables should be unstandardized. Given that CC and physical violence were each measured three times in the same participant, it was not possible for this assumption to be met. However, Kline (2012) states that "nonindependence among score of repeated measures variables or among those from variables that share common methods of measurement can be addressed through the specification of correlated error terms" (p. 121). As such, error terms between variables measured simultaneously

were correlated, as were error terms between each variable that was measured repeatedly. Second, there should be no missing data when the data file is analyzed. As described above, the data were modelled after missing data were imputed using the multiple imputation command. Third, the endogenous variables must be continuous and must follow the normal distribution. Dating violence tends not to follow the normal curve and was found to be both skewed and kurtotic in the current sample (skewness and kurtosis values above 3.00 for CC and IPV at all three time points). Kline (2012) recommends the use of robust ML estimation, which corrects the standard errors and test statistics for non-normality in the data. The MLR estimator was selected for all analyses, as it adjusts the standard errors using a sandwich estimator and chi-squares values using the Yuan- Bentler test statistic (Muthén & Muthén, 2010). Last, exogenous variables should be measured without error. As Kline (2012) asserts, however, error-free measurement of psychological variables is largely unrealistic. Using composite scores instead of individual item scores (as was the case in the current study), though, increases measurement reliability (Dillon, McDonald, & Iacobucci, 2001). For all structural equation models reported, adequate model fit was determined based on the values recommended by Hu and Bentler (1999), which are a chi-square significance value > .05, TLI > .90, CFI > .90, SRMR <.08, and RMSEA <.06.

Description of data. Of the total sample of 254 women, 43 women (17%) indicated that they broke up with their partner between Waves 1 and 2, and 11 (4%) additional women reported that they broke up with their partner between Waves 2 and 3. Of the 165 women who participated in at least two waves (and thus were retained for analyses), 46% of those who had complete data on physical violence at all completed waves reported experiencing physical violence at a minimum of one of the assessment points. Of those participants who reported some

physical violence, 61% reported violence at only one of the waves, 32% reported violence at two of the waves, and 7% reported violence at all three waves. However, it should be noted that in this case, missing data were assumed to mean that no violence occurred during that time period, and thus may be overestimating rates of violence that occurred at only one wave and underestimating violence occurring at two or more data collection points. As can be seen in Figure 2, which depicts the trajectories of the participants who reported at least one act of violence at any of the time points, there was no one common pattern of violence.

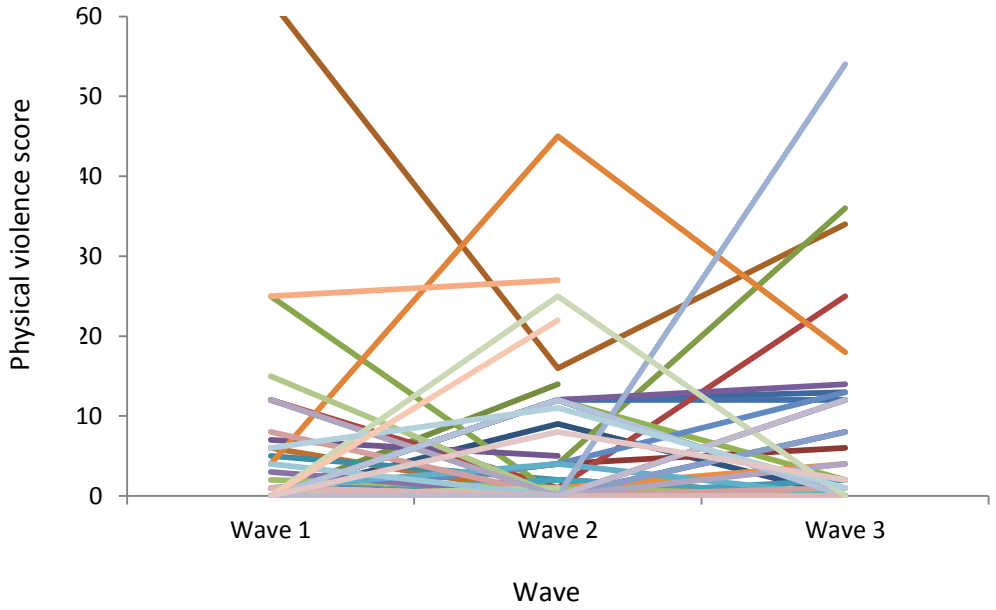


Figure 2

Line graph illustrating the trajectories of physical violence for participants who reported experiencing at least one act of violence at one of the time points.

Ninety-five percent of the women who had complete data for CC at each wave reported experiencing at least one act of CC. Figure 3 depicts the trajectories of the participants who reported at least one act of violence at any of the time points.

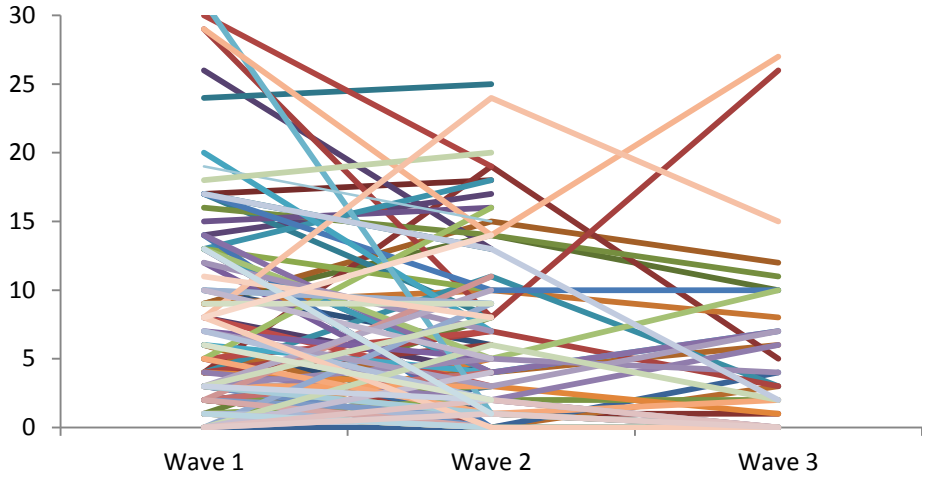


Figure 3

Line graph illustrating the trajectories of coercive control for participants who reported experiencing at least one act of coercive control at one of the time points.

Table 2 reports the means for CC and IPV at each wave (standard deviations were not available due to use of multiple imputations), as well as the percentage of participants with complete data who reported at least one act of violence or CC at each wave. Figure 3 depicts the means of CC and IPV at each wave.

Table 2

Table of Summed Score Means and Prevalence Rates for Coercive Control and Physical Violence at each Wave

Variable	Wave 1		Wave 2		Wave 3	
	M	**%**	***M***	**%**	***M***	**%**
Coercive Control	7.07	78.8	5.59	70.3	5.45	55.7
Demand	5.36	71.5	3.99	61.2	3.64	49.5
Threat	0.67	20.6	0.62	22.9	0.46	15.7
Surveillance	1.04	53.3	0.95	51.9	0.82	44.0
Physical Violence	3.24	15.3	3.12	24.6	3.90	17.6

Note: Prevalence = percentage of participants who endorsed at least one item.

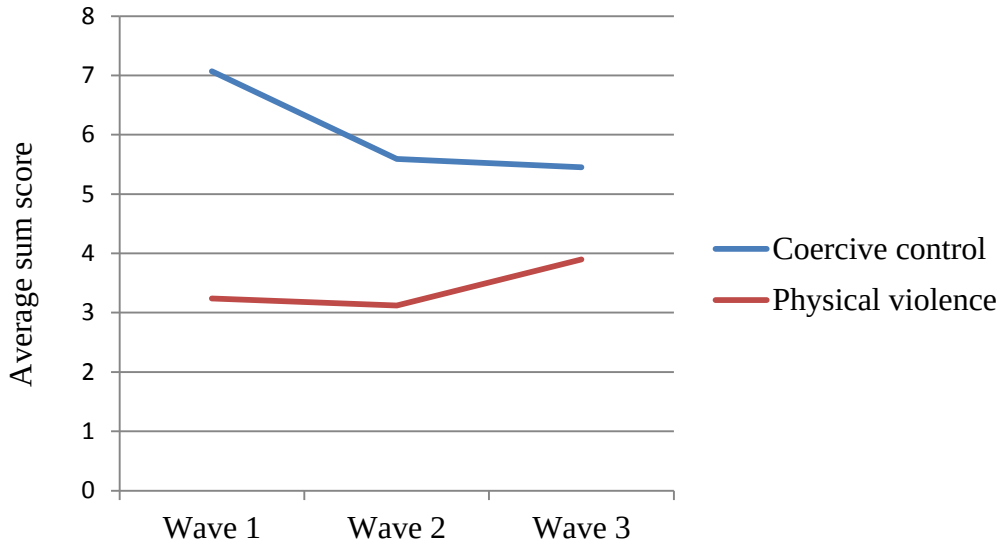


Figure 3. Plot of the summed score means of physical violence and coercive control at each wave.

Correlations between each of the variables of interest included in the model can be found in Table 3, and correlations between all variables of interest (including the subscales of CC) can be found in Table 4.

Table 3

Bivariate Correlations among Social Desirability, Coercive Control, and Intimate Partner Violence at Each Wave

Measure	SD	CC1	CC2	CC3	IPV1	IPV2	IPV3
SD	-	-.27*	-.24*	-.21*	-.12	-.06	-.03
CC1		-	.77*	.92*	.56*	.25*	.25*
CC2			-	.83*	.58*	.29*	.40*
CC3				-	.69*	.28*	.33*
IPV1					-	.39*	.42*
IPV2						-	.39*
IPV3							-

Note. *$p < .05$, two-tailed. SD = social desirability; CC1 – CC3 = coercive control at Waves 1-3, respectively; IPV1 – IPV3 = intimate partner violence at Waves 1-3, respectively.

Table 4

Bivariate Correlations among Components of Coercive Control (Threats, Demands, and Surveillance) and Physical Violence at Each Wave

	SD	Threat1	Surveil1	Demand2	Threat2	Surveil2	Demand3	Threat3	Surveil 3	IPV1	IPV2	IPV3
Demand1	-.32*	.39*	.69*	.58*	.24*	.40*	.71*	.43*	.60*	.50*	.11	.10
Threat1	-.16	-	.57*	.47*	.56*	.36*	.62*	.77*	.66*	.36*	.16	.13
Surveil1	-.34*		-	.51*	.37*	.57*	.57*	.64*	.69*	.62*	.19*	.21*
Demand2	-.19*			-	.37*	.63*	.61*	.46*	.49*	.11	.00	-.04
Threat2	-.03				-	.50*	.51*	.53*	.42*	.09	.22*	.51*
Surveil2	-.18*					-	.43*	.46*	.50*	.13	.13	.31*
Demand3	-.23*						-	.65*	.82*	.37*	.11	.25*
Threat3	-.23*								.75*	.47*	.25*	.09
Surveil3	-.24*									.56*	.13	.16

Note. **p* < .05, two-tailed. SD = social desirability; Demand1 – Demand3 = demands at Waves 1-3, respectively; Threats1- Threats3 = threats at Waves 1-3, respectively; Surveil1-Surveil3 = surveillance at Waves 1-3, respectively; IPV1 – IPV3 = intimate partner violence at Waves 1-3, respectively.

Relationship progression. Sex was reported to be a part of the relationship for 53%, 55%, and 62% of women at Waves 1, 2, and 3, respectively. As depicted in Figure 4, the way in which participants classified their relationship (e.g., casual, committed, exclusive) at each time point tended to progress from less committed to more committed across time.

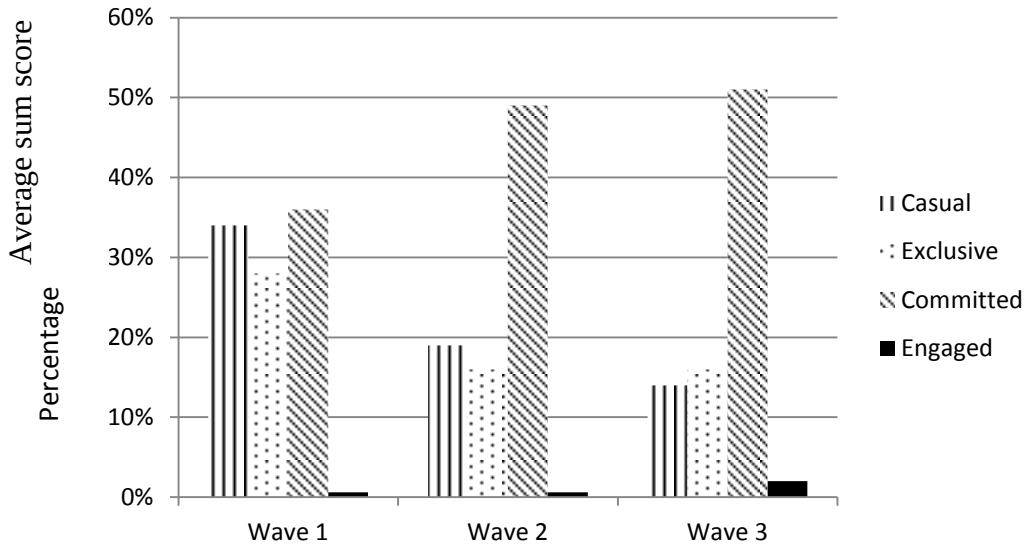


Figure 4. Bar graph illustrating progression of participants' relationship classifications at each wave of the study.

Quantitative Analyses

The following growth curve analyses were conducted to address the study's first research objective, which was to determine the way in which coercive control and IPV each change over time.

CC growth curve model. Coercive control was initially conceptualized as a latent variable comprised of the Demand, Threat, and Surveillance subscales of the CIPR, consistent with the CC model theorized by Dutton and colleagues (2005). However, the measurement

structure model of the latent CC variable was found to be a very poor fit to the data, χ^2 (24, N = 165) = 1319.39, p < .001, RMSEA = .48, CFI = .63, TLI = -.07. As such, the decision was made to sum the Demand, Threat, and Surveillance scores to create one Total CC score, and to enter that total score as a manifest variable, the reliability for which can be found below.

To examine the way in which coercive control changed over time, a growth curve using measurement of CC at all three time points was then modelled, while controlling for social desirability. For the CC growth curve, slope loadings were set to 0 (baseline), 1 (2 months), and 2 (4 months) to specify equal time between time points. The unconditional linear growth model for CC was found to be an adequate fit to the data, $\chi^2(1) = 1.78$, $p = .18$, CFI =.99, TLI = .98, SRMR = .03, RMSEA = .07 [.00-.23]. As for the first research question which aimed to explore whether CC intercept levels differed significantly from zero, results revealed that the CC intercept was significant at the $p < .001$ level, with a mean of 7.07 (SE = .72). Thus, on average CC began at a level significantly different than zero. The variance of the intercept was also significant ($Var_{\text{INTERCEPT}} = 38.26$, $p = .01$), indicating that there was significant variation in the initial starting points of CC between participants. In relation to the second research question which addressed the pattern of change in CC across time, the slope of CC was significant and negative (M = -0.77, SE = .23, $p < .01$), indicating that on average CC declined significantly over time. The variance of the CC slope also was significant, indicating that there was variability between participants in the slope of CC ($Var_{\text{SLOPE}} = -25.89$, $p < .01$). When considering the third research question, the intercept of CC was significantly positively associated with its slope, indicating that higher initial rates of CC were associated with a steeper rate of change in CC over time, or that lower initial CC levels were associated with a slower rate of change in CC over time (Cov = 23.27, $p < .01$).

Physical violence growth curve model. Upon visual inspection (see Figure 2), physical violence was found to follow a nonlinear trajectory, and slope loadings were therefore set to 0 at baseline and 1 for the second time point, and was free to be estimated for the third time point (to specify the nonlinear trajectory). The parameter that was freely estimated was -1.10. The unconditional nonlinear growth model of physical violence was much improved compared to a linear fitting, and was found to be a somewhat good fit to the data, $\chi^2(2) = 3.84$, $p = .15$, CFI = .73, TLI = .37, SRMR = .11, RMSEA = .06. When considering whether initial levels of physical violence differed significantly from zero (research question 1), the physical violence intercept was not significant ($p = .24$), with a mean of 3.24 *(SE* = 2.87). Thus, on average physical violence victimization did not occur at significantly meaningful levels at the two month or less mark in women's romantic relationships. The variance of the intercept also was not significant ($Var_{\text{INTERCEPT}} = 68.86$, $p = .25$), indicating that there was no significant variation in the initial starting points of physical violence between participants. When examining the pattern of change in physical violence across time (research question 2), the slope also was not significant ($M = -0.07$, $SE = 0.75$, $p = .93$), indicating that on average physical violence did not change significantly over time. Consistent with these findings, the variance of the physical violence slope was not significant, indicating that there was little variability between participants in the slope of physical violence ($Var_{\text{SLOPE}} = 0.00$, $p = .999$). Lastly, when assessing the relation between initial levels of physical violence and the rate of change across time (research question 3), due to the lack of variance in the intercept and slope, the intercept and slope of physical violence were not able to be significantly associated ($B = 39.10$, $p = .93$), indicating that initial levels of physical violence were not associated with the rate at which it increased or decreased over time.

Parallel process growth curve model. A parallel process growth model was constructed to examine associations between the slopes and intercepts of CC (linear) and physical violence (nonlinear). The parallel process model, which can be seen in Figure 5, had somewhat adequate fit to the data, $X^2(8) = 54.66$, $p < .001$, CFI = .96, TLI = .90, SRMR = .05, RMSEA = .16.

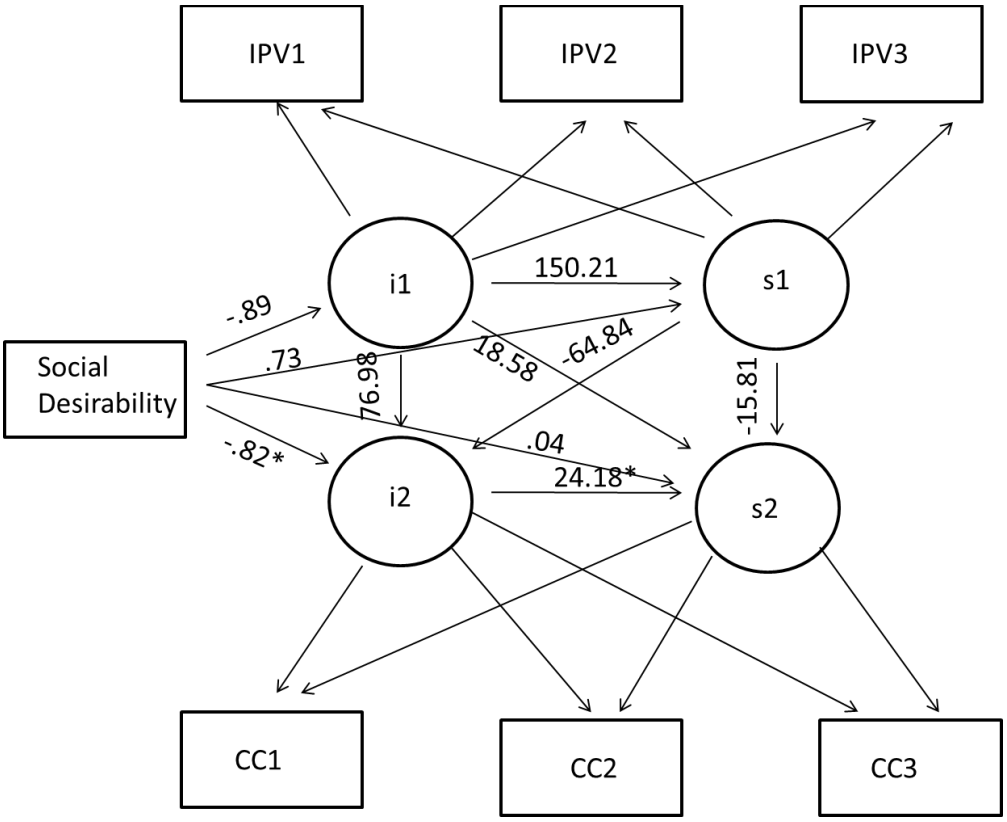


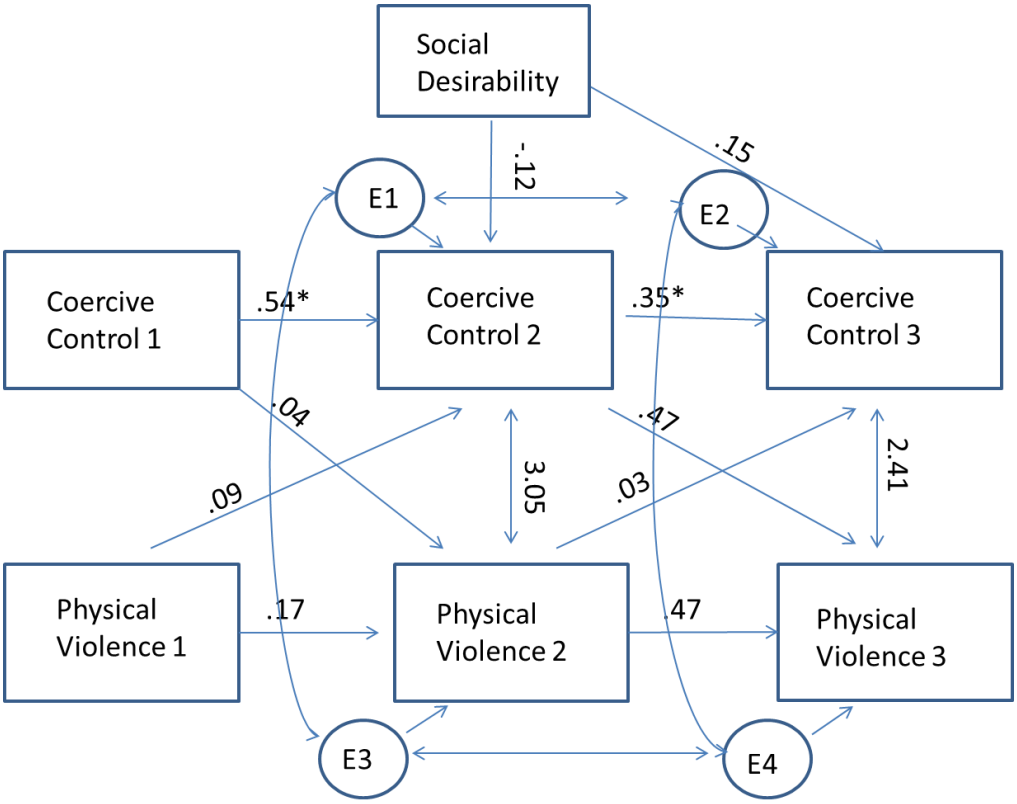
Figure 5.

Estimated parallel process growth model depicting the relation between the slopes and intercepts of physical violence and coercive control.

To investigate whether IPV and CC changed in the same direction over time, the slope of CC was correlated with the slope of physical violence for each participant. The slopes were not significantly related to each other (B = -15.81, p = .20). To determine whether high rates of IPV

and CC at Wave 1 were associated with changes in the other variable, the intercept of IPV was correlated with the slope of CC. Scores at Wave 1 for IPV were not significantly related to the rate of change of CC (B = 18.58, p = .25). Initial rates of CC were also not significantly related to changes in scores for IPV across time (B = -64.84, p = .26). Furthermore, the intercepts of both variables were not significantly associated (B = 76.98, p = .18). This may be due to the lack of variability in violence.

Autoregressive model. An autoregressive model was fit to examine the degree of stability in CC and physical violence over time and to examine how each variable influenced the other. Given the nature of the multiply imputed data (the rationale for which was described above), few model fit indices were able to be calculated; however an autoregressive model with correlated residuals and second order autoregressive effects (i.e., autoregressive effects between non-adjacent time points, such as Wave 1 and Wave 3) was found to be the best fitting model, AIC = 7086.96, SRMR=.03. Social desirability was only found to be significantly associated with CC at Wave 1 in the model (SD on CC1: B = -.70, p <.05). As can be seen in Figure 6, all auto-regressive effects (including first and second order effects) for the CC variable were significant (CC2 on CC1: B = .54, p < .001; CC3 on CC2: B =.35, p < .001), indicating that a significant portion of individual differences in CC remained stable over time. However, contrary to hypotheses, cross-lagged effects were not significant (CC2 on IPV1: B = .09, p = .16; CC3 on IPV2: B = .03, p = .70), indicating that the individual differences in CC scores were not significantly accounted for by temporally preceding physical violence.



*= $p < .05$

Figure 6. Autoregressive model depicting the associations between IPV and CC at all the time points.

Autoregressive effects were not found to be significant for physical violence (IPV2 on IPV1: $B = .17$, $p = .24$; IPV3 on IPV2: $B = .46$, $p = .37$), indicating that for the most part, intra-individual stability of physical violence was not demonstrated. Contrary to hypotheses, cross-lagged effects were not significant either (IPV2 on CC1, $B = .04$, $p = .61$; IPV3 on CC2, $B = .50$, $p = .31$), indicating that CC at the previous time point did not significantly influence physical violence at the next time point. The lack of variability in physical aggression scores was likely responsible, at least in part, for the nonsignificant autoregressive effects for physical violence and both sets of cross-lagged effects. The estimates of cross-lagged effects from CC to physical

violence and vice versa were approximately equivalent ($B_{standardized}$ = .05 and .23 and $B_{standardized}$ = .21 and .03, respectively).

The correlation between residuals at Wave 1 was significant (r = .55, p < .001), indicating that there is shared variance in CC and physical violence over and above the autoregressive and cross-lagged effects, likely due to shared situation-specific effects that influence both variables at that time point. Residuals at Waves 2 and 3 were not significantly correlated (rs = .07 and .04, respectively).

Examination of the *R*-squared values for CC and physical violence indicated how much of each variable can be explained by cross-lagged and autoregressive effects combined. For physical violence, 2%, 19%, and 31% of the variance in physical violence was explained by the model at Waves 1, 2, and 3, respectively. For CC, 7%, 64%, and 89% of the variance was explained by the model at Waves 1, 2, and 3, respectively.

Qualitative Analysis

As indicated above, to address the third major objective of the current study, I used thematic analysis of women's responses to qualitative questions to examine how women in newly developed romantic relationships view coercive control with respect to their own relationships. Women described positive and negative events that recently took place in their romantic relationships, the role CC has played in their own relationships, and their beliefs about the association between violence and control in their relationships.

Positive relationship events. In response to the first question posed: "Over the last two months, what was the best thing that happened in your relationship? Please describe," four main themes emerged. Each of these themes will be discussed subsequently.

Activities and time spent together. Many women indicated that the best thing in their

relationship was an activity done together. These activities were frequently described as dates and ranged from going out for dinner, watching movies, and attending sporting events. As can be seen from the following excerpt, many of the positive relationship events involved a surprise component, or the receipt of a gift: "*The guy I'm seeing surprised me one night and took me out on a date he had planned without me knowing*."

Relationship progression. Participants described ways in which their relationship changed or grew over the last couple of months. For some, these changes involved an increase in intimacy between partners. *"My partner opened up to me about his family and personal issues. I think we reached a new level of trust and became closer emotionally."*

For others, the progression involved the attainment of a common relationship milestone. Sometimes this consisted of a discussion about the status of the relationship with regards to exclusivity, introducing the partner to family members and friends, or saying "I love you" for the first time.

> *The best thing to happen was the day he asked me to be his girlfriend. We were on a walk by the river, and I could tell that he was nervous, and when I said yes he seemed extremely happy. This, of course, made me happy.*

Overcoming challenges. Working through challenges, be they the resolution of problems within the relationship (often leading to a disagreement), or difficult times outside of the relationship (such as the death of a loved one) emerged as a dominant theme. Participants expressed that the support of their partner was beneficial to them and that resolving disagreements by understanding each other's point of view strengthened their relationship. *"We are very good friends, and have both been there for one another through tough challenges that we are both going through."*

Qualities of partner/relationship. Rather than describing a particular event, some participants reflected on their relationship as a whole. This commonly involved expressing that a stable feature of the relationship or of their partner was the best part of the relationship. *"Being treated so well and getting along so well with him. He is not like anyone I have dated."*

Negative relationship events. Participants were also asked the following question: "Over the last two months, what was the worst thing that happened in your relationship? Please describe." In response to this question, many participants described specific fights, sometimes classifying their arguments as small or minor. Others described characteristics of the relationship or their partner that they viewed as being the negative part of their relationship. Four dominant themes emerged.

Time spent together. Many participants reported that the worst part of their relationship was that they did not get to spend enough time together. Some attributed this to living a great distance away from their partner. For others it was a matter of being overly busy with other aspects of their life (e.g., school, work). Although for most participants the difficulty was not having enough time together, some expressed that they felt like their partner wanted them to spend too much time together.

> *The worst thing that has happened in the last two months in my relationship is our current schedules—especially this last month—are so busy that we literally have no time to see each other. I think what's getting us through it is knowing that once the holiday comes and school is done we'll have more time for another. But the worst is definitely feeling like a long-distance couple.*

Interference from others. Some participants expressed that other individuals tried to end their relationship. In many cases, it was an ex-partner who wanted to end their relationship. This

was done through such means as kissing one of them or spreading lies about one of the partners. For other individuals, family or friends expressed disapproval of the relationship and encouraged its end. "*Friends tried to interfere with the relationship by starting rumours and causing drama because they did not want me and my boyfriend to be in a relationship together."*

Jealousy and trust. A large number of participants reported incidents involving jealousy on the part of one or both partners. Specific incidents often involved one member of the couple spending time with or sending text messages to a member of the other sex, sometimes an ex-partner. *"Me and my partner got into an argument about his insecurities and, I didn't feel like he trusted me. He thought because I was being polite and nice to other men, I was flirting with them."*

Value differences. Some participants reported that their relationship rupture stemmed from having different values than their partner. The described differences included political, religious, or social values.

> *Finding out that he and his family hunts. I am an animal rights activist and a vegetarian. I found out that he hunts but not as a sport. I would never allow him to stop; however, as it is a family tradition and they are very close. They love and respect animals more than most people who don't hunt. So I can deal with it and respect it. As he respects my views and opinions and tends to agree with me on most.*

Responses to arguments. Many participants made reference to actions taken following the incident described. These fell into two main subthemes. Some individuals stated that they did not talk to their partner for a specified period of time after the argument. Others reported specific actions taken toward resolving the problem. For many, this involved discussion with the partner until a resolution was reached.

We had an argument regarding personal beliefs about a subject where both of us became very annoyed with the other for two days, but we ended up resolving it by both explaining our sides calmly and agreeing that we understood where the other was coming from and agreed to disagree.

CC and IPV. At Wave 3, participants were asked the following question: "In your opinion, how would power or control manifest itself in a romantic relationship?" Given the broader nature of this question, responses were diverse, but four overarching themes emerged.

Distribution of control. Some participants commented on whether control should be a part of a romantic relationship, and some participants pointed out that it is an inevitable part of any relationship. A few participants stated that an imbalance of control is not always a bad thing. Nonetheless, the majority of participants stated that power and control should be distributed equally, with no single partner holding any power over the other. *"I find that it (power/control) can be a very negative force in a relationship and cause either party to assume a dominant position which should never be the case. There should be noticeable equality in a relationship."*

Characteristics of controlled/controlling partner. One theme that emerged was participants attributing certain characteristics to the partner who is being controlled or the partner who is doing the controlling. The partner who is being controlled was described as being submissive, relying on their partner for everything, and having low self-confidence. *"If the partner is submissive and does not stand up for themselves then that gives the other partner leeway to become the dominant and controlling one."*

The picture painted of the partner doing the controlling was that of someone who cares less about (or is less invested in) the relationship and has greater resources (e.g., financial,

status). Other participants described that the controlling partner was lacking power in other areas of their life.

> *If one partner has a higher status than the other partner or if one is stronger than the other, the superior partner could be pressuring or forcing the "lesser" partner into doing something they might not really want to do. The partner with less power could feel inferior and obligated to please the partner with more power. This power imbalance could be very stressful in a relationship.*

Demands, threats, and violence. When describing how power and control actually manifest in a relationship, participants made reference to demands that the controlling partner places on the other partner. The link between threats and violence was also described by some participants. *"Power and control could manifest in many different ways. It could be enforced through physical violence, verbal threats or abuse, or psychological abuse."*

Jealousy. Jealousy emerged as a theme for this question as well. Participants described jealousy as a reason why someone would want to exert control over their partner. Some participants stated that jealousy over who their partner speaks to causes them to try to control their partner's interactions.

> *When two people are in love and infatuated with each other, jealousy tends to creep in. When jealousy gets in the way of clear thinking, control starts with little things such as talking to others guys or girls, for example. These are normal and natural things to occur in relationship but it can be extreme as well.*

CC in participants' own relationships. Participants were asked to "Describe the role that power/control has played in your current relationship." The majority of participants expressed that they were content with the balance of power in their relationship.

Equal balance. Many participants stated that power was equally balanced between them and their partner. Participants described compromising with their partners in a respectful manner, as well as taking turns between who makes each decision, depending on the areas of expertise of each partner.

> *My partner and I have very similar personalities and are very easy going. I wouldn't say that either of us controls the relationship nor does one of us have more power than the other. We are respectful towards one another and share our thoughts and opinions on different subjects without controlling each other or trying to gain power over one another.*

For my own good. Amongst partners who stated that there was not an equal balance of power in their relationship, participants often spoke to the positive aspects of having one partner more in control than the other. For example, it was often stated that the controlling partner was trying to encourage a positive behaviour (e.g., studying more) or the cessation of a negative behaviour (e.g., smoking) in their partner. *"I try to encourage my partner to better himself by getting a job and going back to post-secondary school. I may be more pushy than I want, but it's because he does not have motivation himself."*

Power struggle. Other participants took a more negative perspective on the power imbalance in their own relationship, referring to an ongoing attempt by each partner to control the other. Some described this continuous struggle as leading to constant disagreements or affecting the overall quality of their relationship.

> *We lost trust in each other, and once that happens, the entire relationship became a power struggle, with each person trying to exercise the most control over the over person. The relationship is becoming more based on worrying about "babysitting" the*

other person and bothering each other with what we are doing every second of the day, rather than focusing on mutual love and support. I love my partner very much, but this does not seem to be a productive, solid relationship that we can build off of.

Jealousy. Jealousy again emerged as a theme for this question. Participants described how in their own relationships attempts to control the actions of the other partner often stemmed from jealousy and wanting to keep their partner from forming relationships with other people.

My boyfriend does not like to give me or any of my guy friends the benefit of the doubt before even knowing how my relationship is with them. So he insists on me never talking to them again. He is a very jealous person.

Relation between violence and control. Participants were asked to answer the following question: "Do you believe that there is a relation between physical violence and control in dating relationships? Please explain your answer." Several themes emerged.

Violence as a form of control. The most common theme expressed by participants was that physical violence and control are different aspects of the same phenomenon. Participants described physical violence as a means of either getting control or maintaining control over one's partner. The fear of future violence was described by some as the mechanism that allows one partner to gain or maintain the upper hand over the other partner.

Yes, I believe that there is a relation between physical violence and control in relationships because if one person likes to have control in their relationship and they do not feel like they have control they might resort to physical violence to get that control. Some people even just use physical violence right from the beginning of the relationship as a form of control.

Control before physical violence. A number of participants indicated that physical violence stems from control, in that once one partner has control over the other, the partner in control is able to threaten violence and the other partner will submit. Others indicated that once the controlling partners senses that they are in control, they may feel entitled to do whatever they would like to their partners, including being physically violent. "*Yes, because once the person has control over you emotionally they might start with the physical, thinking that you'll be scared and won't say anything."*

Control and violence not necessarily comorbid. A number of participants raised the point that even when a relationship is unbalanced with regards to power and control between the partners, violence is not inevitable. Some participants mentioned that personal beliefs about using violence against women might prevent the controlling partner from being physically violent, or that even if physical violence is not present, other negative relationship events (e.g., verbal conflict) may be present instead. Others stated that the relation between violence and control is not necessarily bi-directional. "*Sometimes, but not always. I think you always have to have control in order to have violence, but just because the control is there does not mean the violence is."*

Violence to offset loss of control.

Within the relationship. A number of participants identified violence as occurring when one partner who values being in control feels that he or she is not the partner in control in that specific moment. Not being in control was often described in terms of "not getting their way."

Yes. Whenever I don't get my own way, I get really angry to the point of throwing things.

Trying to control someone is like you own them, and when they don't comply to your wishes, it brings about bad behavior- even violence.

Outside of relationship. Some individuals described that the feeling of lack of control may sometimes occur in domains of life outside of the relationship, yet still may be taken out on the romantic partner. This represents a form of displacement.

> *Yes, when the abuser is hitting the partner, it gives him a sense of power and control in his life and takes out his day on the woman (probably because he feels like he has no control in life outside of the relationship).*

Generation of fear. A number of participants mentioned that fear plays an important role in the relation between control and violence. It was described that physical violence, or threats thereof, create fear of future violence, which allows the partner to control the behaviour of the victim. The creation of fear in the victim was described as intentional on the part of the controller, to assure compliance to the partner's demands to avoid being hurt, or to make the victim remain in the relationship for fear of the physical consequences of leaving the relationship.

> *I believe that in certain relationships, violence is often combined with control. Certain people feel that they can control others through fear, and if the other person in the relationship is afraid of the violence, then they can be controlled. I believe that fear would be the main component in control; violence would be the secondary component.*

From control to violence or vice versa. The final two questions posed of participants were: "Do you believe that control has contributed to physical violence in your own relationship? Please explain why or why not," and "Do you believe that physical violence has contributed to control in your own relationship? Please explain why or why not." These two questions were posed in the hopes of ascertaining whether participants viewed physical violence as leading to CC or CC as leading to physical violence more often within their own relationships, and

therefore were being reported concurrently. However, the responses provided by participants were for the most part not consistent with this goal. The majority of participants indicated that both questions were not applicable to their relationship. In the words of one participant: "*Not at all. We both have our own type of control in this relationship, and it has never gotten violent. We express in words what we want to see in each other, and in the relationship itself.*" A second participant similarly stated: "*There is no physical violence in our relationship. We have control, but we each take turns exhibiting the control, in a noninvasive and nonharmful verbal way."* Participants who indicated that violence or control was a part of their own relationship frequently answered the two questions reciprocally. This made it impossible to determine opinions on the order of CC and physical violence. For instance, one participant indicated that control has contributed to physical violence in her relationship as reflected in the following response: *"Sometimes, because on the times he has more control, he is more violent."* In addition, she also indicated that the reverse is true (i.e., that physical violence has contributed to control in her relationship): *"Yes. Whoever is physically violent usually has more control."*

Table 5 contains a summary of all dominant themes and subthemes identified by participants in response to the questions posed of them.

Table 5

Dominant Themes and Subthemes in Response to Qualitative Questions

Question	**Dominant Themes and Subthemes**
Over the last two months, what was the best thing that happened in your relationship? Please describe.	Activities and time spent together Relationship progression Overcoming challenges Qualities of partner/relationship
Over the last two months, what was the worst thing that happened in your relationship? Please describe.	Time spent together Interference from other Jealousy and trust Value difference Responses to arguments
In your opinion, how would power or control manifest itself in a romantic relationship?	Distribution of control Characteristics of controlled/controlling partner Demands, threats, and violence Jealousy
Describe the role that power/control has played in your current relationship.	Equal balance For my own good Power struggle Jealousy
Do you believe that there is a relation between physical violence and control in dating relationships? Please explain your answer.	Violence as a form of control Control before physical violence Control and violence not necessarily comorbid Violence to offset loss of control -Within the relationship - Outside of the relationship Generation of fear

CHAPTER 4

Discussion

The current study aimed to describe the ways in which coercive control and physical violence influence each other over the first six months of a romantic relationship. Quantitative analyses in the form of growth curve and autoregressive models provided an actuarial account of the relation between the variables of interest, and qualitative thematic analyses provided a description of participants' own CC and IPV experiences.

Relationship Characteristics

When reviewing the literature for this study, it became apparent that little is known about what the beginning of a romantic relationship typically looks like among young adults. Therefore, in addition to addressing the main objectives of describing the onset and course of CC and IPV in the first six months of university students' romantic relationships, the current study also provides information about various dating processes, including the rate at which newly dating young adult couples break up, how quickly they become exclusive, and common positive and negative events that arise during the first four months of a dating relationship.

Within the first two to four months of participants' relationships, 17% of participants reported that their relationships had ended. This is very likely to be an underestimate, as an additional 26% of participants did not complete Wave 2 of the survey (but did not email the researcher to say that their relationship had ended). It is likely that some of these participants' romantic relationships had ended as well. During the two-month period between Waves 2 and 3 (which corresponds to months 4 to 6 of participants' relationships), an additional 4% of participants reported that their relationships had ended. The breakup rate was much lower during this second time period than during the first period, indicating that a relationship is more tenuous

during the first two to four months. However, once couples reach their four-month anniversaries, it appears that their relationships become far more likely to endure (at least for the next two months).

Given the longitudinal nature of this study, changes in relationship characteristics were examined. Sex became a part of the relationship for more participants as the relationship went on, with 53%, 55%, and 62% of participants at Waves 1, 2, and 3, respectively, endorsing sex as a part of their relationship. In their sample of college-aged men and women, Jackson, Kleiner, Geist, and Cebulko (2011) found that although no participant reported that sexual intimacy was the sole indicator of whether two individuals were in an exclusive dating relationship, sexual intimacy was found to serve as an indicator of relationship seriousness, with men more often than women viewing sex as a necessary component of a serious relationship.

In the current sample, relationship classifications also progressed as would be anticipated, from casual dating to exclusivity, commitment, and engagement. When asked to describe the best thing that happened in their relationship over the last two months, many of the participants referred to spending time participating in activities together, overcoming challenges together, getting to know each other better, and discovering positive qualities that their partner possesses. Many of these positive relationship events are consistent with the rituals that are involved in the courtship phase of dating, wherein the couple participates in social activities to assess whether the relationship has the potential to deepen over time (Jackson et al., 2011).

Other positive relationship events described by participants referred to overt markers of the progression of the relationship from casual dating to a committed relationship. For example, some participants expressed that receiving a gift from their partner was the best moment of their relationship. Belk and Coon (1993) have found that although giving a gift to a partner may start

off as instrumental (with the hope of receiving a gift in return), giving a gift shifts to becoming an expression of love as the relationship progresses. Jackson et al. (2011) found that 18% of the college-aged women in their sample reported that in order for someone to be considered their boyfriend the women would have to have received an expensive gift from him. Similarly, activities such as meeting dating partners' families (which was described as a positive relationship event by a number of participants, and is considered to be a marker of relationship progression), was considered necessary by 57% of the women for them to have considered someone their boyfriend (Baxter & Bullis, 1986; Jackson et al., 2011).

Interestingly, the idea of relationship progression and growth also was evident when participants described the negative events in their relationship. Following the reported conflict, participants frequently described how the conflict was handled by the couple (e.g., through negotiation or discussion) and that having gotten to the other side of the conflict made them feel closer to their partner. This suggests that events that are generally perceived as negative may actually serve the function of deepening the relationship and making it more solid. This is consistent with a study by Laursen (1993), who found that following conflict with a romantic partner, 15% of adolescent girls reported that their relationship improved.

The negative relationship events commonly described by participants centered on themes of instability that would be likely to dominate during a relationship that is not well established. Common issues reported included concerns about the amount of time that the couple would like to spend together, reflecting a navigating of each partner's expectation of what the day to day features of the relationship would look like, should it continue. A clash between the values of the members of the couple was also sometimes described, which is consistent with the phase of a relationship when the couple is trying to assess compatibility. This serves the aim of determining

whether the relationship is likely to be a good fit for the long run (Jackson et al., 2011). Other common troubles at this phase reflected feelings of insecurity in the continuity of the relationship. “Relational uncertainty,” comprised of self-uncertainty (uncertainty about one’s own willingness to be in the relationship), partner uncertainty (uncertainty about one’s partner’s willingness to be in the relationship), and relationship uncertainty (doubts about the status of the relationship), is a hallmark of the beginning phase of dating relationships which, in healthy relationships, decreases over time (Knobloch, Solomon, & Cruz, 2001). Relationship uncertainty has been linked to experiences of jealousy, with individuals who report greater relationship uncertainty being more likely to experience jealousy about their partner spending time with someone else (Knobloch et al., 2001). Consistent with feeling uncertain about the status of the relationship, jealousy and lack of trust in the other partner were frequently described by participants in the current study.

Social Desirability and CC

Social desirability was held constant across each of the analyses in the current study, because previous studies have found that individuals who score highly on the trait of social desirability tend to underreport their experiences of IPV (Straus, 2008). That is, it was theorized that the same would be true for CC, given its relatively negative evaluation by participants in the qualitative responses. Correlations revealed that although higher levels of social desirability were indeed associated with lower levels of IPV at each point, the relation was not significant. As well, social desirability was even more negatively related to CC than IPV at each time point. This suggests that participants may have been even more hesitant to report demands, threats, and methods of surveillance used by their partner, than to report physical violence victimization. Perhaps the behaviours that comprise the CC scale may be more ambiguous (e.g., whether a

request from a partner is considered a demand), and are thus more easily minimized and underreported by participants in attempts to minimize, normalize, or deny their experiences as negative. This may be easier to do with CC than physical violence, because physical violence tend to be more visible than CC behaviours, and as a result, it may be harder for participants to justify not endorsing a physical violence item if it had occurred. Threats at Waves 1 and 2 were the only components of CC that did not correlate significantly with social desirability. Again, perhaps demands and surveillance behaviours are perceived as more action-based and thus harder to minimize or forget whereas threats, unless acted upon (which may then take a more action-oriented or physical form), are more hypothetical in nature. Moreover, frequencies indicated that threats were the least prevalent, and thus the lack of significant correlations between threats and social desirability may be attributed to lower base rates of threats.

Coercive Control over the First Six Months

The definition of CC used in the current study was derived from Dutton and Goodman's (2005) model, wherein CC is described as a pattern of demands placed on a victim, threats for noncompliance to the demands, and surveillance methods to determine whether the victim has complied with the demands. Despite each of the components of CC being highly positively correlated with each other at each time point in the current study, these constructs were not found to form a cohesive latent variable. One reason why demands, threats, and surveillance did not form a cohesive latent variable might be that demands had much higher base rates than threats or surveillance (see Table 2), which may have resulted in a variable that was not cohesive. It is important that future studies seek to validate Dutton and Goodman's model of CC in additional samples. If the components of this model of CC are not found to form a cohesive latent variable,

as was the case in the current study, further refinement of the definition of CC and its components would be warranted.

The first objective of the current study was to describe the nature of CC and physical violence at the very beginning of a dating relationship and the trajectory that each takes over the first six months of a relationship. At least one act of CC over the study time period was reported by 95% of participants, suggesting that experiencing some acts of CC at the beginning of a relationship may be normative or expected. Supporting the idea that these acts may be expected early on, tactics of CC were on average found to already be occurring to a significant degree by the first assessment point (less than two months into the relationship). CC then declined significantly over the study period, indicating that the use of tactics of CC was not stable. However, there was significant variability in both the initial starting point and rate of change among participants, suggesting that the trajectory that CC takes over the course of a relationship is quite different between individuals. Higher initial rates of CC were significantly associated with a steeper decrease in CC over time, which is consistent with the notion of regression toward the mean, wherein extreme values tend to become closer to the average at subsequent measurement points (Barnett, van der Pols, & Dobson, 2005). When an individual starts off near the mean on a certain variable, that variable is less likely to change drastically over time. Alternatively, tactics of CC such as checking a partner's phone to be sure the partner is not communicating with other potential suitors may be less necessary as trust in one's partner grows. Trust in a relationship has been found to increase as the perceived strength of one's partner's commitment to the relationship increases, as was likely occurring during the first few months of participants' newly developed relationships for many of the participants (Wieselquist, Rusbult, Foster, & Agnew, 1999).

Of interest is the difference in prevalence between physical violence and CC in the current sample. Only 5% of the current sample reported experiencing zero acts of CC over the course of the study, compared to 46% who reported experiencing no physical violence over the same period of time. This suggests that acts of CC are more prevalent than acts of physical violence. However, there is an important caveat to this assertion. Stark (2007) states that the impact of abuse may not be directly associated with its prevalence. This is particularly the case for CC. It is important to recall that CC is conceptualized as a pattern of behaviours, and it is the loss of freedom created by a context of CC that is hypothesized to create the negative psychological outcomes of victims of CC. Therefore, although only 5% of relationships had no acts of CC, this does not mean that the 95% of relationships wherein at least one act of CC was endorsed are "unhealthy" or would result in negative consequences. Further, this does not mean that just because acts of CC are common, it is not impactful for its victims.

Significant autoregressive effects between CC at each time point were found. Such a result does not necessarily imply that CC remains stable for each participant over time, but instead suggests that participants' relative standing on this variable remained stable over time. This finding could have a number of interpretations, including that: (a) on average CC did indeed remain stable within each participant's relationship, (b) each participant uniformly increased or decreased on this variable (but maintained the same order in relation to other participants), or (c) initial levels of CC systematically determined the degree and direction of change in CC over time (while maintaining the relative order of participants). However, in conjunction with the finding of a significantly decreasing slope of CC, it can be inferred that option (b) is most likely, in that individuals uniformly decreased in the amount of CC that they experienced over the studied time period.

The steady decrease in CC over the six-month period identified in the current study suggests that there is a general pattern of CC development across time for most university women's relationships, with higher levels of CC initially, before tapering off uniformly. This finding is at odds with the general agreement in the literature that psychological abuse remains stable over time (e.g., Capaldi et al., 2003; Fritz & Slep, 2009). However, CC and psychological abuse, although overlapping, are not conceptually the same, with CC in the current study measured by specific demanding, threatening, and surveillance behaviours, rather than the broader pattern of degrading and isolating behaviours that usually define psychological abuse. The time period covered by the current study was also shorter than other studies reviewed and took place during the beginning stage of participants' relationships, when the relationships were new and changes across relationship variables were most likely to occur.

The observed decrease in CC over the first six months of participants' relationships in the current study may occur because once a context of CC has been established, the controlling partner does not have to use as many overt behaviours of CC. This could be because once a culture of dominance characterizes the relationship, demands can become more subtle and threats less explicit. Similarly, the necessity of surveillance to determine whether the controlled partner complied with the demand may not be as strong if the controlling partner believes that the controlled partner is fearful enough of the consequences of not meeting the demand that they will undoubtedly comply. This is consistent with the general idea behind Dutton and Goodman's (2005) statement that it is not necessarily important that the controlling partner actually use methods of surveillance to determine whether the victim complies with their demands. Instead, the critical factor is that the victim *believes* that surveillance methods are being used, as it is the perception that their actions will be verified that increases the likelihood that they will comply

with demands. If this is the case, the current use of frequency of behaviours (specifically of demands, threats, and surveillance) may not serve as an ideal proxy measure for CC. Instead subjective questions about how likely victims are to comply to new demands, or the degree to which victims fear their partners, may better capture the experience of CC from victims' perspectives.

IPV over the First Six Months

In the current sample, at least one act of physical violence victimization was reported by 15% of participants during the time between when participants first began dating and when they completed the first wave of the study (at most two months into their relationship). Although not an exactly comparable time period, this rate is similar to the 28% of participants who reported that they either perpetrated or were a victim of physical violence when their relationship was still classified as "casual dating" in a study by Cate, Henton, Koval, Christopher, and Lloyd (1982).

The trajectory of physical violence over the first six months of participants' relationships was examined. It is important to note that 54% of women in the current study did not report any acts of physical violence at any of the time points. Across participants, the average number of acts of physical violence was found to decrease slightly between Waves 1 and 2, and then increase slightly between Waves 2 and 3, resembling a "V" shape. Overall, the slope of physical violence was not found to be significant, perhaps due to an averaging out of the nonlinear slope over the whole study period, but more likely due to stability of violence-free relationships, as there was little variability in the slope of violence between participants. Physical violence was not found to have begun at a significant rate at the first assessment point, and this finding was consistent across participants. Furthermore, initial levels of physical violence were not associated with the rate at which physical violence increased or decreased over time. This is likely because

physical violence did not actually change significantly over time, potentially due to the high number of participants who reported no violence at any of the time points, and because there was little variability to be predicted. Finally, autoregressive effects were not found to be significant for physical violence, likely because there was little variability in scores to be predicted, rather than because physical violence was not stable over time. Together, these findings indicate that, across participants, physical violence did not occur at a significant frequency over the first two months of their relationship, and that this remained stable for the studied time period.

Previous studies have fairly consistently found support for the stability of physical violence over time (Fritz & Slep, 2009; Lawrence & Bradbury, 2007; Quigley & Leonard, 1996). The results of the current study are not at odds with previous studies, finding no significant linear slope of physical violence in this sample. There was no significant autoregressive effects of physical violence, but as mentioned above, this is likely a product of little variance in violence. Further investigation into the trajectory of physical violence early in the relationships of couples who experience significant amounts of violence should be conducted next, to draw firmer conclusions about the stability of violence early in the relationships of different types of couples (i.e., those with high rates of violence).

Although this study did not find that violence was occurring at a rate significantly different from zero at the first time point, this should not be interpreted to mean that women experience no violence whatsoever during the first two months of romantic relationships. Indeed, nearly one in six women reported at least one act of physical violence against them less than two months into their relationships. This figure suggests that physical violence in emerging adult dating relationships is indeed an issue worthy of investigation.

CC and Physical Violence Concurrently

The second objective of the current study was to examine the interrelations between physical violence and CC over the six-month study period. Overall, the slopes of physical violence and CC were not significantly associated. Moreover, initial levels of physical violence in the relationship were not significantly related to the rate of change of CC victimization nor were initial rates of CC significantly related to the rate of change of physical violence victimization across time. Thus, experiencing higher versus lower levels of coercive control or physical violence at approximately two months into the relationship did not significantly predict the rate at which women experienced the other form of aggression across the six-month period. Taken together, this study did not find a direct relationship between CC and physical violence, though this may be a product of low base rates of physical violence in this sample of newly dating couples.

Participants' beliefs (as measured qualitatively) about the role of coercive control in relation to violence paint a different picture. The majority of participants described CC and physical violence as part and parcel, with violence considered to be a form of control. Consistent with the model of CC proposed by Dutton and Goodman (2005), participants described physical violence as a means of obtaining control, and the fear of future violence as a mechanism that allows one partner to maintain the upper hand over the other partner.

One of this study's research questions was whether violence and CC began at the same time, or whether one tends to precede the other. Acts of coercive control were reported to have already occurred in the first two months of participants' relationships at a rate significantly different from zero. Unlike coercive control, violence was not found to occur at a rate that was significantly different from zero during the first two months of participants' relationships. This is consistent with the conceptualization of IPV described by Dutton and Goodman (2005).

According to their model, this negative relationship process usually begins with a period of setting the stage for coercive control to begin, such as by creating vulnerabilities for the victim and/or limiting the resources available to the victim. This "setting the stage" phase suggests that creating a context in which CC can occur starts early in the relationship. Once the stage has been set, the core components of CC can begin, with demands being made of the victim, threats for noncompliance to those demands, and surveillance to ensure demands are being met. In this model, physical violence is described as a consequence of or as a punishment for noncompliance to dissuade future noncompliance. The present study's finding that CC components generally began within the first two months, whereas physical violence did not is consistent with the theorized temporal sequence of CC to physical violence. This order of progression was mirrored in participants' responses to the qualitative questions. Although participants largely did not answer the two questions aimed at determining temporal sequence in a way that was interpretable (potentially due to the fact that many participants reported that violence and control were actually the same construct), when asked to describe the relationship between CC and IPV, many participants described CC as paving the way for violence.

When the trajectories of both CC and IPV are examined together, a synergistic process can be hypothesized. Between Waves 1 and 2, physical violence decreased only slightly whereas CC began to decline sharply. Physical violence then increased between Waves 2 and 3, as the decline in CC slowed. An explanation for this pattern could be that as perpetrators begin to notice that the amount of control they possess in the relationship is decreasing, they may resort to physical violence to re-establish that sense of control. A fourth time point would have helped to determine whether this was the case.

When CC and IPV were included together in an autoregressive model, the influence of each of the variables of interest on the other variable at subsequent time points could be examined. However, neither variable significantly predicted the other variable at any of the subsequent time points. This is inconsistent with Tanha and colleagues' (2009) results, which showed that CC was directly related to physical violence victimization. This inconsistency may be accounted for by methodological differences, given that Tanha et al.'s (2009) sample was comprised of married couples who had children and were undergoing divorce proceedings, whereas the current study assessed university women in newly commenced dating relationships. A second possibility, as indicated previously, may be due to the lack of variation in physical aggression scores. Lastly, the lack of a clear temporal relation between CC and physical violence in the current study may actually be attributed to the mere fact that the relationships were so new. Specifically, as described by Beyers and Seiffge-Krenke (2010), the main function of dating in the late adolescence phase is evaluating whether the partners are a good fit for each other in the long run. This involves a constant analysis of the relationship and of each partner's role in it, with resulting changes being made to each partner's own behaviours. As such, the studied time period represents a phase in which the relationship is changing rapidly, making it very difficult to predict individuals' actions at future measurement points.

The lack of a clear predictive relation between physical IPV and CC suggest that these two forms of interpersonal aggression, each of which has been associated with negative physical and mental health outcomes in prior studies (Golding, 1999; Johnson & Leone, 2005), must not be lumped together as the same phenomenon. Although many participants stated that they view violence as a form of control in the qualitative portion of this study, the quantitative data in this study do not support that idea. This mismatch is important to be aware of when educating youth

on dating relationship processes. A relationship does not have to be characterized by physical violence for it to be coercively controlling. Conversely, a relationship does not need to be set within the context of CC for it to become physically violent. Although CC may not serve as a direct precursor to physical violence, the relation between the two processes is unpredictable, at least in the early stages of emerging adults' romantic relationships. Further, this implies that CC may not be problematic solely due to its association with physical violence, but rather in its own right.

Overall, the model containing CC and physical violence at each wave (while controlling for social desirability throughout) did a fair job of accounting for variance in each of the variables, especially for CC. For physical violence, 2%, 19%, and 31% of the variance (albeit limited) was explained by the model at Waves 1, 2, and 3, respectively. For CC, 7%, 64%, and 89% of the variance was explained by the model across the three waves, respectively. It is evident from looking at these numbers that accounting for each of the variables at later time points was easier than at the first time point. In fact, significantly correlated residuals at Wave 1 suggest that there are shared influences on both variables at the first time point that were not accounted for in the model. Conversely, residuals at Waves 2 and 3 were not significantly correlated, suggesting that the left-over variance not accounted for by the variables in the model are independent to CC and physical violence, respectively. The model evaluated in the current study, however, was not created to represent a comprehensive model of the process by which CC and IPV come to exist in relationships. As a result, it is not surprising that there is unexplained variance, especially at the initial time point. A number of prior studies have examined individual (e.g., personality traits, alcohol use) and dyadic factors (e.g., communication style) that predict the onset of violence in intimate relationships. Capaldi, Knoble, Shortt, and Kim (2012) provide

a thorough review of contextual, developmental, and relationship risk factors. Future research should consider including key factors into the current model to help account for additional variance.

Perceptions of CC

The third objective of this study was to obtain qualitative information on how individuals in newly emerging relationships view CC with respect to their own relationship and in relation to violence. When asked to describe the role of control in their own relationship, the majority of women described an equal balance, which was perceived as the ideal distribution by many. A relationship in which power is equally divided was not unanimously desired, however. Some women reported advantages to one partner having more control, such as when the more controlling partner was perceived to be smarter or to know better than the other partner on some issue.

Some participants described characteristics that they attributed to the controlling partner and the controlled partner. Of particular interest was the description of the controlling partner, which was that of someone who was less invested in the relationship and who had greater financial resources or greater status. Due to the imbalance in status, the controlled partner was then described as feeling the need to submit to the demands of their partner, or else risk the relationship ending. These perceptions are in line with social exchange theory, which posits that relationship continuation is determined through a cost-benefit analysis of the exchanges that occur between individuals in the relationship, as well as the alternatives available outside of the relationship (Homans, 1958). Specifically, according to Emerson's (1962) power-dependence theory, the source of an individual's power over another person is the dependence that the other person has on them. Molm (1997) echoed that idea, extending it to include that when one partner

is more dependent on the other, this creates a power imbalance, which allows the exploitation of the dependant partner to occur. This dependence is fostered by the ability of one partner to provide rewards to the other (such as the status or financial benefits described by participants). This dependence of the controlled partner was further echoed by participants' description of the controlled partner as submissive and reliant on their partner.

The fear that there are no other individuals to date if their relationship with their current partner was to end was described by some women as a potential maintaining factor of abusive relationships. This mirrors power-dependency theory, in which perceived availability of alternatives is negatively associated with continuing a relationship (Emerson, 1962). This idea has implications for counselling individuals who are in abusive relationships. Specifically, in sessions it may be beneficial to explore clients' beliefs about the options that are available to them, with the aim of pointing out alternatives that they may not have thought of previously. According to power-dependency theory, increasing the perceived available alternatives would increase the likelihood of the client leaving the abusive relationship.

Interestingly, there was a mismatch between qualitative and quantitative responses on the occurrence of violence in participants' own relationships. Although 54% of participants endorsed at least one act of violence on the CTS-2, there were very few who acknowledged that this occurred when asked to describe the role of violence in their relationship, stating that their relationship does not involve violence. This may reflect individuals' hesitance to label the experiences as violence, or themselves as a victim (even though the qualitative questions posed of participants did not use "victim/perpetrator" terminology). Indeed, a study by Hamby and Gray-Little (2000) found that of 78 women who had been the victim of at least one act of

physical violence, 40% reported that they did not believe that the event was an instance of "abuse." Perhaps the terminology of violence had a similar minimizing effect.

Across qualitative questions relating to CC and violence, a theme of jealousy emerged. Jealousy in intimate relationships has previously been found to be associated with violence perpetration (Giordano et al., 2010; Johnson et al., 2014), but has not to the author's knowledge been examined in relation to CC. Inclusion of both trait- and state-dependent jealousy could provide greater explanatory power to models of CC and physical violence in intimate relationships.

Limitations

Although the current study was designed to be a stepping stone toward a better understanding of CC and IPV, it suffers from a number of limitations. In terms of methodology, there were very few previous studies on such topics as breakup rates within the first few months of young adults' dating relationships and violence rates among undergraduates in new relationships on which to base the study's design. As such, much of the methodology was based on practicality, rather than on prior theory or findings. A second limitation was that the drop-out rate in the current sample was higher than anticipated. The combination of legitimate drop out (due to couples breaking up and no longer being eligible to participate in subsequent waves) with attrition for unknown reasons resulted in a sample size that was lower than the desired 200 for SEM analyses (Kline, 2011). However, Jackson (2003) suggests that the 200 rule is not necessarily ideal, and that the sample size to parameter ratio may have some value in estimating appropriate sample size. As well, it is possible that there are differences between couples that broke up and those who did not which would result in a self-selection bias that could affect the conclusions drawn from this study. However, comparisons between participants who completed

all three waves with those who only completed two waves determined that the groups did not differ significantly on rates of physical violence, CC, or social desirability at Wave 1.

A third methodological issue pertains to the length of time between assessment time points. Given that the first assessment point occurred at any point within the first two months of the onset of women's dating relationships, there is quite a range of variability, especially between the two extremes of the time point (e.g., dating for one day versus two months). An interval of two months was chosen so as to maximize participant recruitment while minimizing variability between participants (rather than on prior theory).

This study collected data only from women in heterosexual relationships who reported on physical violence and CC victimization. This decision was made based on the practical constraints of collecting data from a pool of participants who are mainly female. Furthermore, it has been suggested that female-to-male and same-sex violence may serve different functions than male-to-female violence. To decrease heterogeneity, some have suggested that these populations should be examined separately (Anderson, 2005). Comparing the victimization and perpetration experiences of couples in different types of relationships could increase understanding of how gender impacts on violence and CC experiences.

Finally, the current study relied on women's retrospective self-reports collected over the Internet. As such, the data are subject to both recall bias and to validity concerns. In order to minimize the extent of recall bias, assessment intervals were chosen to be short. As well, social desirability was controlled for to minimize the likelihood of both under- or over-reporting violence and control, and responding in a more socially desirable manner. Furthermore, inclusion criteria for the study required participants to be female and in dating relationships for less than two months. Even though this study took place online and there was no clear way to discern

whether the individual completing the survey was indeed female or in a newly established relationship, I did include validation questions in the demographic section asking women to report their sex and for how long they had been in their current dating relationships.

Study Implications

Suggestions for future research. Taken together, the findings of the current study suggest that CC and IPV, although not completely unrelated, do not seem to predictably impact on each other over the first six months of a relationship, at least not among couples with fairly low levels of physical violence. Given the intricacies of relationships during this phase, a more thorough investigation of each of these constructs within a smaller number of couples (perhaps who are at greater risk for experiencing violence) would provide a better description of how these variables are related. As well, shorter, more frequent reporting on these variables (e,g., using a daily diary paradigm) would allow for stronger conclusions to be drawn than when constructs were measured at two month intervals. The qualitative data attained in the current study provides a starting point for further investigations, preferably using a medium that allows follow-up questions to be asked (e.g., focus groups).

This study did not find IPV to be occurring at a rate significantly different from zero at the two-month mark. Future studies investigating the onset of violence may therefore wish to increase this interval. Conversely, CC was found to have already begun within the first two months of women's romantic relationships. The current study thus suggests that researchers who wish to capture CC before it begins would need to measure it prior to the two-month mark. Given that the present study is the first of its kind, it may serve as a pilot study that shapes the methodology of future studies on CC and IPV.

Policy. The current study adds to the large body of literature that has identified dating violence as a significant issue in the lives of many youth. However, despite evidence of substantial rates of IPV occurring amongst adolescents and adults, Hyman, Lucibello, and Meyer (2010) assert that public policy and legislation have not been adapted to reflect this reality. Specifically, the authors assert that criminal and civil laws in most of the states of the U.S. are not easily applicable to adolescent dating violence. That is, the current laws in the majority of states pertain specifically to domestic violence, which does not typically include individuals in dating relationships who are not cohabitating. As such, perpetrators of dating violence are less likely to come into contact with the legal system, missing out on protective court orders for victims and court-based interventions for IPV that have been found to be effective for juvenile perpetrators in other states (Uekert et al., 2006). It is recommended that legislation protecting adult victims of IPV be made more inclusive so that adolescents who are victims of dating violence are afforded the same level of protection as adult victims of violence, and perpetrators receive access to the same services as their adult counterparts.

Another issue plaguing the effectiveness of legal responses to IPV is one that affects individuals across the lifespan. Currently, laws created for the protection of victims of IPV are based on "the violent incident model, that equates abuse with discrete assaults and gauges severity by the degree of injury inflicted or threatened" (Stark, 2012, p. 199). This model is not applicable to relationships that do not involve clear circumscribed incidents of physical violence. Thus it may be the case that relationships characterized by extreme CC are not actually punishable by law, and victims may thus not be eligible to receive victim services. Stark (2012) proposes a number of changes to the way in which IPV is legally conceptualized that would increase the ability of law enforcement agents to protect victims. First, police response to IPV

should follow the antisubordination principle, which views actions that infringe on the freedom of others through means of subjugation or dominance, as a crime. Second, law enforcers would benefit from viewing IPV as an ongoing process, rather than as a one-off event. In addition to allowing law enforcers to better assess a situation when they arrive on the scene to determine an appropriate response, viewing IPV within the historical context of the relationship would also allow police to recognize IPV as a legitimate chronic problem, reducing frustration at repeated incidents involving a particular couple.

Although the recommendations provided by Stark (2012) represent important methods of changing the culture of legal involvement in IPV, the results of the current study suggest that tactics of CC occur at a significant rate less than two months into a dating relationship. As such, it would be too extreme to imply that individuals who use any tactics of CC should be punishable by law. Before arrests are made on the basis of CC perpetration, a means of determining whether acts of CC between partners are normative, or whether they are extreme enough to warrant legal interference must first be established.

Clinical.

Prevention. In the current sample, CC was not found to co-vary in a linear way with physical violence, but was found to occur at a significant rate very early on in young adults' relationships. Given previous findings of detrimental outcomes of CC even in the absence of physical violence (Coker et al., 2002), it remains important to educate individuals about CC and what it entails, with the hope that early identification of CC in emerging adults' own relationships would prevent or shorten relationships characterized by CC. The role of jealousy and how it relates to the use of methods of surveillance (e.g., checking one's partner's text messages) may be an especially relevant topic for youth, as some may view being "checked up

on" as an expression of love, and thus may not be aware of the larger pattern of CC of which it may play a part.

Intervention. Current approaches to treatment for victims of IPV may need to be adapted to include experiences of CC, and must also be appropriate for use with young adults. Hyman and colleagues (2010) state that the use of victim-centered approaches is particularly beneficial when working with adolescent victims of dating violence. Because adolescents are in a developmentally fragile phase, they may require extra support when pursuing legal options and when they are in treatment (Hyman et al., 2010). In light of the literature that supports adolescence as the life stage when identity and capacity for intimacy develop (Erickson, 1968), disruptions in relationships with intimate partners at this stage may be particularly detrimental to future romantic relationships and to the victim's identity development, highlighting the particular importance of post-victimization counselling for adolescents who have experienced dating violence. Furthermore, counseling adolescent victims of IPV may also bring about challenges that are less common in adulthood, such as the high likelihood that the victim may not be able to maintain physical distance from the perpetrator (e.g., if they go to school together).

The approach to counselling may also need to be adjusted when counselling victims of CC. Given the sense of powerlessness and dependence that has permeated the lives of victims of CC, reclaiming independence and autonomy should be a goal of therapy. Thus, when working with individuals who have experienced CC it is critical to create an environment in which the victim feels supported. Allowing them to make as many choices within therapy sessions, as well as encouraging them to assert their independence outside of sessions (but not necessarily within the abusive relationship, as that may exacerbate violence), may help them to regain their sense of autonomy and self-efficacy.

Conclusions

The current study is the first study known to the author to investigate CC prospectively. Using a repeated measures design with short (i.e., two month) time intervals between assessments allowed for the careful examination of the way in which CC and physical violence each change over the first six months of dating relationships. Multi-item measurement of the constructs of interest and advanced methods of missing data and statistical analyses represent an improvement over prior studies. As well, using mixed methods to attain participants' qualitative accounts of IPV and CC in their own relationships allowed for a more thorough, descriptive account of how these constructs are experienced in real dating relationships.

Despite the advances to the understanding of CC that were made by the current study, CC in dating relationships as it relates to physical violence is not yet well understood, suggesting the need for future studies on their association. The findings of the current study support the need to educate adolescents about how CC manifests in new relationships, especially given the high prevalence of tactics of CC identified in the current study.

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APPENDICES

Appendix A

Demographics Questionnaire

1. How old are you?

2. In what month were you born?

3. In what year were you born?

4. What is your current year of study?
   - First Year
   - Second Year
   - Third Year
   - Fourth Year
   - Fifth Year
   - Other (specify)

5. What is your current major?

6. What is your racial or ethnic identity (check all that apply)?
   - Arab / Middle Eastern
   - Black / African Canadian
   - East Asian
   - Aboriginal / Native Canadian
   - Hispanic / Latino
   - South Asian
   - White / Caucasian
   - Biracial / Multiethnic (specify)
   - Other (specify)

7. What, if any, is your religious affiliation (check all that apply)?
   - Protestant Christian
   - Roman Catholic
   - Evangelical Christian
   - Jewish

Muslim
Hindu
Buddhist
Atheist
Agnostic
Other (specify)

8. What is your sexual orientation (check all that apply)?
   Heterosexual
   Gay
   Bisexual
   Other (specify)
   Unknown

9. What is your own yearly income?
   Under $20,000
   $20,000 to $39,999
   $40,000 to $59,999
   $60,000 to $79,999
   $80,000 to $99,999
   $100,000 or Greater
   Prefer not to answer

10. What is your parents' current marital status?
    Married to each other
    Separated
    Divorced
    Never married to each other and not living together
    Never married to each other and living together
    One or both parents have died

11. What is parent 1's highest level of education?
    Less than high school
    High School Diploma
    Vocational / Technical School
    College Diploma
    Bachelor's Degree
    Master's Degree
    Doctoral Degree

Professional Degree (e.g., MD)
Other (specify)
Don't know

12. In question 11, who is parent 1?
Mother
Father
Grandparent
Other (specify)

13. What is parent 2's highest level of education?
Less than high school
High school graduate
Vocational/technical school
College
Bachelor's degree
Master's degree
Doctoral degree
Professional degree (e.g., MD)
Other (specify)
Don't know

14. In question 13, who is parent 2?
Mother
Father
Grandparent
Other (specify)

15. What is your parents' combined income (make your best estimate)?
Under $20,000
$20,000 to $39,999
$40,000 to $59,999
$60,000 to $79,999
$80,000 to $99,999
$100,000 or Greater
Don't know
Prefer not to answer

16. Who do you currently live with (check all that apply)?
Nobody

Dating partner
Roommate(s) who is not my current dating partner.
Parent(s) or other Family Member(s)
Other (specify)

17. Have you ever sought psychological treatment?
_____ No (**skip to question 25)**
_____ Yes

18. How long did you participate in therapy?
Therapy 1: Approximate start date: _____ mm / yyyy

Approximate end date: _____ mm / yyyy

Therapy 2: Approximate start date: _____ mm / yyyy

Approximate end date: _____ mm / yyyy

19. What was the nature of the therapy? (*Please mark all that apply.*)
_____ Individual _____ Family
_____ Group _____ Couples
_____ Other (*Please specify:* _____)

20. For what type(s) of problems did you seek help? (*Please mark all that apply.*)
_____ Mood (e.g., depression)
_____ Anxiety
_____ Substance Use/Abuse
_____ Relationship problems: (*Please specify* _____)
_____ Aggression (*Please specify* _____)
_____ Work/school problems
_____ Grief
_____ Other (*Please specify:* _____)

21. About how many different people have you been on a date with?
_____ different people

22. How old were you when you went on your first date?
_____ years old

23. Have you ever been in an intimate relationship that you would classify as physically abusive?

____ Yes

____ No

24. If yes, have you ever reported your partner to the police for the violence?

____ Yes

____ No

25. Have you ever been reported to the police for having used violence against an intimate partner?

____ Yes

____ No

26. How many hours per week do you spend dating (according to your own definition of dating)?
    _____ None at all
    _____ 1-2 hours per week
    _____ 3-4 hours per week
    _____ 5-6 hours per week
    _____ 7 or more hours per week

27. Is your current dating partner male or female?
    Male
    Female
    Other (specify)

28. How long have you been in this relationship with your current dating partner?
    _____ Years
    _____ Months

29. How would you classify your relationship with your current dating partner?
    Casual Dating
    Exclusive Dating
    Committed Relationship
    Engaged
    Married
    Other (specify)

30. Is sex a part of your relationship with your current dating partner?

Yes
No

31. How committed are you to your relationship with your current dating partner?

0	1	2	3	4	5	6	7	8
Not at all								Extremely
Committed								Committed

32. How likely is it that you will end your relationship with your current partner in the next two months?

0	1	2	3	4	5	6	7	8
Not at all								Extremely
Likely								Likely

Appendix B

Marlowe-Crowne Social Desirability Scale- Form C (Reynolds, 1982)

Listed below are a number of statements concerning personal attitudes and traits. Read each item and decide whether the statement is ***true*** **or** ***false*** as it pertains to you personally.

1. It is sometimes hard for me to go on with my work if I am not encouraged. _____
2. I sometimes feel resentful when I don't get my way. _____
3. On a few occasions, I have given up doing something because I thought too little of my ability. _____
4. There have been times when I felt like rebelling against people in authority even though I knew they were right. _____
5. No matter who I'm talking to, I'm always a good listener. _____
6. There have been occasions when I took advantage of someone. _____
7. I'm always willing to admit when I make a mistake. _____
8. I sometimes try to get even rather than forgive and forget. _____
9. I am always courteous, even to people who are disagreeable. _____
10. I have never been irked when people expressed ideas very different from my own. _____
11. There have been times when I was quite jealous of the good fortune of others. _____
12. I am sometimes irritated by people who ask favors of me. _____
13. I have never deliberately said something that hurt someone's feelings. _____

Appendix C

Qualitative Questionnaire

1. In your opinion, how would power or control manifest itself in a romantic relationship?

2. Describe the role that power/control has played in your current relationship.

3. Do you believe that there is a relation between physical violence and control in dating relationships? Please explain your answer.

4. If applicable, do you believe that control has contributed to physical violence in your own relationship? Please explain why or why not.

5. Do you believe that physical violence has contributed to control in your own relationship? Please explain why or why not.

Appendix D

Participant Pool Advertisement

Study Name: Longitudinal Dating Research Study

Brief Abstract: Individuals in new dating relationships wanted for longitudinal relationship research!

Detailed Description:
The purpose of this study is to better understand young adults' dating behaviour. More specifically, this study will investigate the development of various types of conflict that may occur in dating relationships.

If you volunteer to participate in this study, we would ask that you complete three online surveys at two-month intervals (Wave 1 = initial survey; Wave 2 = two-month follow-up; Wave 3 = four-month follow-up). More specifically, at Wave 1 you would respond to a series of questions pertaining to you and your relationship with your partner. At Waves 2 & 3, you will be invited to complete the survey again (if you are still in that relationship). All three surveys should take approximately 1 hour each to complete. You will receive 1 bonus point for participating in Wave 1. You can earn money ($5 for Wave 2 and $10 for Wave 3) or additional research credit (1 bonus points) for participating in each of the follow-up assessments.

Location: Online
Eligibility Requirements:

- **At the time of Wave 1,** you must be in a "new" heterosexual dating relationship. A "new" heterosexual dating relationship means that:
    a. you and your other-sex dating partner can only have been **dating for two months or less** (i.e., a maximum of 2 months).
    b. You and your dating partner **cannot have dated each other previously**.

Duration: 1 hour

Points/Pay:

- If you are signed up for the Psychology Participant Pool, you will receive 1 bonus credit points toward an eligible psychology course.

Preparation: None

Disqualifiers: Other studies being conducted in the Healthy Relationships Research Group. (Longitudinal Dating Couples Pilot Study).

Participant Sign-Up Deadline: 12 hours before study is to occur

Appendix E

Consent Form- Wave 1

CONSENT TO PARTICIPATE IN RESEARCH

Title of Study: **Longitudinal Dating Research Study**

You are asked to participate in a research study conducted by Amanda Levine under the supervision of Dr. Patti Timmons Fritz, an Associate Professor in the Department of Psychology at the University of Windsor. The results of this study will form the basis of Amanda Levine's doctoral dissertation research project. If you have any questions or concerns about the research, please feel to contact: Amanda Levine, M.A. at levinea@uwindsor.ca or Patti A. Timmons Fritz, Ph.D., C. Psych. by e-mail at pfritz@uwindsor.ca or by phone at 519-253-3000 ext. 3707

PURPOSE OF THE STUDY

The purpose of this study is to better understand young adults' dating behaviour across time. More specifically, this study will investigate the development of various types of conflict that may occur in dating relationships and how young adults perceive, interpret, and respond to relationship conflict.

PROCEDURES

If you volunteer to participate in this study, we would ask that you complete three online surveys at two-month intervals (Wave 1 = initial survey; Wave 2 = two-month follow-up; Wave 3 = four-month follow-up). At each of the time points, you would respond to a series of questions pertaining to you and your relationship with your partner. All three surveys should take approximately 60 minutes each to complete. You will receive 1 bonus points for participating in Wave 1. You can earn money or additional research credit for participating in the follow-up assessments.

If you volunteer to participate in this study, we will ask you to do the following things:

- To enter the study, you will need to enter the **User ID** that has been provided to you in the email that you received that contains the link to this survey. Please **DO NOT** use your University of Windsor User ID.

- To print a copy of this form to keep for your records, simply select the "print" button at the bottom of the page.

- Please follow the instructions at the beginning of each survey section before completing the surveys and answer the questions as openly and honestly as possible.

POTENTIAL RISKS AND DISCOMFORTS

There are some potential risks or discomforts that may come from your participation in this study that are important to note. Due to the sensitive and personal nature of this study, you may experience negative thoughts or emotions (e.g., anxiety, sadness, embarrassment, anger) related to some of your past or current experiences in dating relationships. Should you experience any form of distress following your participation in this study, please either contact someone from the community resource list that will be provided to you at the end of the study or contact the investigators (Amanda Levine or Dr. Patti Timmons Fritz).

POTENTIAL BENEFITS TO SUBJECTS AND/OR TO SOCIETY

Although the potential benefits of participating in this study vary from person to person, research has found that some individuals report feeling closer to their romantic partners after participating in research on relationships. By participating in this study, you will help increase our knowledge about how conflict develops in young adults' romantic relationships across time, and how they perceive, interpret, and respond to these various types of conflict. This research may ultimately inform treatment programs aimed at improving relationship quality and satisfaction among young dating couples.

PAYMENT FOR PARTICIPATION

At Wave 1 you will receive 1 bonus point for 60 minutes of participation toward the Psychology Department Participant Pool if registered in the pool and enrolled in one or more eligible courses. Participants who complete Wave 2 or Wave 3 can choose to earn 1 bonus point for each wave or the respective cash payments ($5 at Time 2 and $10 at Time 3) at these assessments. Following submission of the survey, you will be asked to email contact Amanda Levine by email (levinea@uwindsor.ca) to indicate whether you would like to earn participant pool points or to receive financial compensation. If you elect to earn financial compensation, an appointment will be set up over email for you to come to the Healthy Relationships Laboratory located in room 284 of Chrysler Hall South on the University of Windsor campus to collect your payment. You will be asked to sign a receipt indicating that you have received the payment. Should you wish to receive payment by mail instead, you must indicate so in your email, and provide your mailing address. If provided, this address will be kept in a password protected spreadsheet, separate from your survey data.

CONFIDENTIALITY

Any information that is obtained in connection with this study that is identifying will remain confidential and will not be disclosed without your permission, except as may be required by the law or professional guidelines for psychologists. These limits to your confidentiality include: a) if you were to report or be observed to be at imminent risk of harming yourself or another person and/or b) if you were to report anything related to child abuse. Your name will never be connected to your results or to your responses on the questionnaires; instead, a number/code will be used for identification purposes. Information required for us to recontact you at the follow-up assessments, to match up your data across visits, or to send payment (e.g., name, email, address, ID#, dates of study completion, mailing address) will be stored

in a separate, password-protected data file and will be used for scheduling follow-ups, for linking data, and mailing payment only. In addition, the only form that requires your name (the receipt for payment) will be stored in a locked filing cabinet separately from the other data and study material. Information that would make it possible to identify you or any other participant will never be included in any sort of research report or publication. Only the researchers working on this project will have access to the information that is provided. The study data will be stored for a minimum of five years following publication of their results in accordance with recommendations of the American Psychological Association. The compensation receipts, data set used for scheduling follow-ups and for linking data, and online data will be destroyed and/or deleted once it is no longer necessary to store the data.

PARTICIPATION AND WITHDRAWAL

You can choose whether to be in this study or not. If you volunteer to be in this study, you may withdraw at any time without consequences of any kind – however, if you choose to withdraw prior to signing this consent form and completing the online survey, you will not receive compensation. You may also refuse to answer any questions you don't want to answer and still remain in the study. The investigator may withdraw you or your data from this research if circumstances arise which warrant doing so. You may choose to withdraw by checking the "Withdraw my data" box at the bottom of each survey page or by closing the web browser. At each time point, once the final page of the survey has been completed and you have clicked the button to submit the survey, this means that the data has been transmitted, and you will no longer be able to remove your data.

FEEDBACK OF THE RESULTS OF THIS STUDY TO THE SUBJECTS

It is expected that the results of this study will be available on the University of Windsor Research Ethics Board (REB) website (http://www.uwindsor.ca/reb) by June 30, 2015.

SUBSEQUENT USE OF DATA

These data may be used in subsequent studies, in publications, and in presentations.

RIGHTS OF RESEARCH SUBJECTS

You may withdraw your consent at any time and discontinue participation without penalty. If you have questions regarding your rights as a research subject, contact: Research Ethics Coordinator, University of Windsor, Windsor, Ontario N9B 3P4; Telephone: 519-253-3000, ext. 3948; e-mail: ethics@uwindsor.ca

SIGNATURE OF RESEARCH SUBJECT/LEGAL REPRESENTATIVE

I understand the information provided for the study **Longitudinal Dating Research Study** as described herein. My questions have been answered to my satisfaction, and I agree to participate in this study. I have been given a copy of this form. By clicking "I Agree", I am giving consent to participate in this study.

SIGNATURE OF INVESTIGATOR

These are the terms under which I will conduct research.

Electronic signature of Investigator	Date

[Print]

["I Agree" button]

["I do not wish to participate" button]

Appendix F

Participant Debriefing Form Waves 1 & 2

Thank you for participating in the initial phase(s) of this study. Given that all couples argue and experience difficulties in their relationships, we are interested in studying factors that are related to these types of experiences. Please take a look at the list of resources that is provided to you below. This list contains contact information for various community services in case you wish to contact someone to talk about some of your current or past experiences.

Student Counseling Centre, University of Windsor
The Student Counseling Centre (SCC) provides assessment, crisis, and short term counseling. If longer term therapy is indicated, the SCC will provide a referral to the Psychological Services Centre. All services are confidential and offered free to students. The SCC is open 8:30 am – 4:30 pm, Monday – Friday. The SCC is located in Room 293, CAW Centre.
519-253-3000, ext. 4616.
scc@uwindsor.ca

Psychological Services and Research Centre, University of Windsor
The Psychological Services Centre offers assistance to University students in immediate distress and to those whose difficulties are of longer standing. They also seek to promote individual growth and personal enrichment.
519-973-7012 or *519-253-3000, ext. 7012*

Teen Health Centre
The Teen Health Centre is dedicated to helping Essex County's young people achieve physical and emotional health and well-being through education, counseling, and support.
519-253-8481

Sexual Assault / Domestic Violence & Safekids Care Center
This care center is located in the Windsor Regional Hospital and provides assessment, counseling, and treatment for domestic violence, sexual assault, and child abuse. It is open 8 am to 4 pm, Monday – Friday or 24 hours, 7 days a week through the hospital emergency services.
519-255-2234

Hiatus House
Hiatus House is a social service agency offering confidential intervention for families experiencing domestic violence.
519-252-7781 or *1-800-265-5142*

Thank you for your participation!

Appendix G

Web Safety Instructions

This information provided is related to web safety. Given that you may not wish that your partner know of your participation in this study, it is recommended that you delete your internet browser history. If you would like, this form can be printed and kept for your records.

Section 1: Clearing Your Internet Cache

The Internet cache helps pages load faster by storing images and web pages locally on your computer. This results in a possibility that an unwanted viewer can access this information if they look through the cache folder. Please see below for instructions on clearing your Internet cache. This can also be done any time after you use the Internet to help prevent security risks.

Directions for Clearing the Browser Cache

Browser	**Win9x/NT/2000/Me**	**Mac OS**
Internet Explorer	1. From the menu bar select "Tools" 2. Select the option "Internet Options…" 3. Under the "General" Tab look for "Temporary Internet Files" 4. Click on the "Delete Files…" button. 5. Select the "Delete All Offline Content" checkbox and click "OK" 6. Click "OK" once more to return to your browser.	1. From the menu bar select "Edit" 2. Select the option "Preferences…" 3. Select the "Advanced" item in the left menu. 4. Under "Cache" click "Empty Now". 5. Click "OK" once more to return to your browser.
Netscape	1. From the menu bar select "Edit" 2. Select "Preferences…" 3. Under the "Advanced" menu select "Cache" 4. Click on the "Clear Memory Cache" button. 5. Click on the "Clear Disk Cache" button. 6. Click "OK" once more to return to your	1. From the menu bar select "Edit" 2. Select the option "Preferences…" 3. Under the "Advanced" headline in the left menu select "Cache".

	browser.	4. Click “Clear Disk Cache Now”. 5. Click “OK” once more to return to your browser.

Section 2: Removing Sites from Your Browser History

Browser history stores previous visits to web pages in an area that can be easily accessed at the click of a button. This is useful if you forget to bookmark a site that you later want to revisit. However, if you are viewing material that you would not like others to see, this is a possible security risk. For example, you may not want anyone to know that you completed this survey. Please see the below instructions for removing websites from your browser’s history. This can be done any time after using the Internet to prevent security risks.

Directions for Removing Sites from Your Browser History

Browser	**Win9x/NT/2000/Me**	**Mac OS**
Internet Explorer	1. From the menu bar select “View”. 2. Highlight “Explorer Bar”. 3. Select “History”. 4. A bar will show up on the left of your browser. Select the item you wish to delete. 5. Right Click on the selected folder and select “Delete”.	1. From the menu bar select “Window”. 2. Select “History”. 3. Select the item you wish to delete. 4. Press the “Delete” key. 5. Click “OK”.
Netscape 6	1. From the menu bar select “Tasks”. 2. Highlight “Tools” 3. Select “History” 4. Open the folder in which you wish to delete an item. 5. Open the Sites folder. 6. Select an item in the folder you wish to delete. 7. From the menu bar select “Edit”	

	8. Select “Delete entire domain…”	
Netscape 4x	1. From the menu bar select “Communicator” 2. Highlight “Tools” 3. Select “History” 4. Select the item you wish to delete. 5. Right click on the item. 6. Select “Delete”.	

Section 3: Removing Cookies from your Hard Drive

Cookies are small pieces of information left behind by web pages to store information frequently requested. For example, if you click a checkbox that says “save this information for later” it would write a cookie onto the hard drive preventing you from having to enter the information again next time you visit the site. This is why it can be problematic to delete all of the cookie files. The instructions below tell you how to delete only the cookies from high risk site so that you do not end up deleting all of your stored passwords, user information, and preferences from various websites. This can be done any time after using the Internet to prevent security risks.

Directions for Removing Cookies from your Hard Drive

Browser	**Win9x/NT/2000/Me**	**Mac OS**
Internet Explorer	1. From the menu bar select “Tools”. 2. Select the option “Internet Options”. 3. Under the “General” Tab look for “Temporary Internet Files”. 4. Click on the “Settings…” button. 5. Click on the “View Files” button. A list of cookies will appear. 6. Select the cookie you wish to delete. 7. Right mouse click and select “Delete”.	1. From the menu bar select “Edit”. 2. Select the option “Preferences…” 3. Select the “Advanced” item in the left menu. 4. Under “Cache” click “Empty Now”. 5. Click “OK” to return to your browser.
Netscape 6	1. From the menu bar select “Edit”. 2. Select “Preferences” 3. Under “Privacy & Security” select	1. From the menu bar select “Edit”. 2. Select the option

	“Cookies”. 4. Click “View Stored Cookies”. 5. Select the cookie you wish to delete. 7. Click “Remove Cookie” Warning: Do NOT check box titled “Don’t allow removed cookies to be reaccepted later.” This will add them to a list easily accessible through the “Cookie Sites” tab.	“Preferences…” 3. Under the “Advanced” headline in the left menu select “Cache”. 4. Click “Clear Disk Cache Now”. 5. Click “OK” to return to your browser.
Browser	**Win9x/NT/2000/Me**	**Mac OS**
Netscape 4.x	It is not advisable to use Netscape 4.x to view sensitive material. Although they are difficult to find, cookies are stored on the machine without a means of removing them.	1. From the menu bar select “Edit”. 2. Select the option “Preferences…” 3. Under the “Advanced” headline in the left menu select “Cache”. 4. Click “Clear Disk Cache Now”. 5. Click “OK” to return to your browser.

Appendix H

Participant Debriefing Form Wave 3

Research Summary

Thank you for participating in this study. Given that dating conflict is a relatively common occurrence in individuals' dating relationships, we are interested in studying factors that are related to these types of experiences. In particular we are focusing on how people respond to conflict in dating relationships at various points in individuals' relationships, and the role that power and control plays in relationship violence. Please take a look at the list of resources that is provided to you below. This list contains contact information for various community services in case you wish to contact someone to talk about some of your current or past dating experiences.

Student Counseling Centre, University of Windsor
The Student Counseling Centre (SCC) provides assessment, crisis, and short term counseling. If longer term therapy is indicated, the SCC will provide a referral to the Psychological Services Centre. All services are confidential and offered free to students. The SCC is open 8:30 am – 4:30 pm, Monday – Friday. The SCC is located in Room 293, CAW Centre.
519-253-3000, ext. 4616.
scc@uwindsor.ca

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The Psychological Services Centre offers assistance to University students in immediate distress and to those whose difficulties are of longer standing. They also seek to promote individual growth and personal enrichment.
519-973-7012 or *519-253-3000, ext. 7012*

Teen Health Centre
The Teen Health Centre is dedicated to helping Essex County's young people achieve physical and emotional health and well-being through education, counseling, and support.
519-253-8481

Sexual Assault / Domestic Violence & Safekids Care Center
This care center is located in the Windsor Regional Hospital and provides assessment, counseling, and treatment for domestic violence, sexual assault, and child abuse. It is open 8 am to 4 pm, Monday – Friday or 24 hours, 7 days a week through the hospital emergency services.
519-255-2234

Hiatus House
Hiatus House is a social service agency offering confidential intervention for families experiencing domestic violence.

519-252-7781 or *1-800-265-5142*

Distress Centre Line Windsor / Essex
The Distress Centre of Windsor-Essex County exists to provide emergency crisis intervention, suicide prevention, emotional support and referrals to community resources by telephone, to people in Windsor and the surrounding area. Available 12 pm to 12 am seven days a week.
519-256-5000

Community Crisis Centre of Windsor-Essex County
A partnership of hospital and social agencies committed to providing crisis response services to residents of Windsor and Essex counties. Crisis center is open from 9 am to 5 pm, Monday – Friday, at Hotel-Dieu Grace Hospital in Windsor, ON.
519-973-4411 ext. 3277

24 Hour Crisis Line
24 Hour crisis telephone line provides an anonymous, confidential service from 12 pm to 12 am seven days a week. The 24 Hour Crisis Line serves Windsor and Leamington areas.
519-973-4435

Assaulted Women's Helpline
The Assaulted Women's Helpline offers 24-hour telephone and TTY crisis line for abused women in Ontario. This service is anonymous and confidential and is provided in up to 154 languages.
1-866-863-0511 or 1-866-863-7868 (TTY)

Neighbours, Friends, & Family
Neighbours, Friends, and Families is a public education campaign to raise awareness of the signs of woman abuse so that those close to an at-risk woman or an abusive man can help.
http://www.neighboursfriendsandfamilies.ca/index.php

Thank you for your participation!

VITA AUCTORIS

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